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WEEKLY WEATHER AND CROP BULLETIN

U.S. DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration, National Weather Service

U.S. DEPARTMENT OF AGRICULTURE
National Agricultural Statistics Service and World Agricultural Outlook Board

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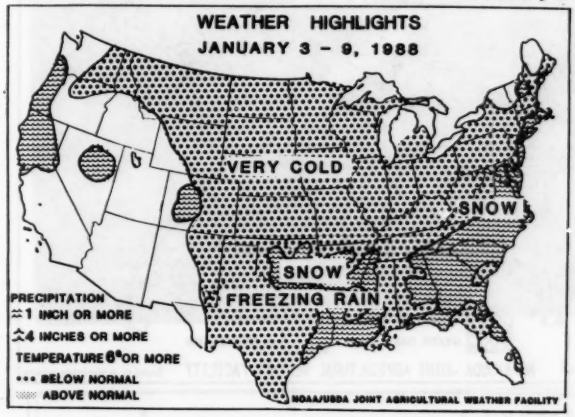
National Weather Summary

January 3 - 9, 1988



HIGHLIGHTS: Temperatures were below normal except in the Southwest and southern Florida. Heavy precipitation was confined mainly to Pacific coastal regions and the Southeast. A major winter storm developed over the Great Basin on Tuesday, and through the remainder of the week laid down a swath of snow, sleet, and freezing rain stretching from New Mexico across the southern Plains and the Southeast to the Northeast.

SUNDAY...Strong northerly winds ushered an arctic air mass into the northern Great Plains, the upper Mississippi Valley, and the Great Lakes region. Subzero temperatures accompanied blowing snow in the Dakotas, Minnesota, and the Great Lakes States. Snow continued to fall in Kentucky, Tennessee, northern Alabama, northern Mississippi, the Middle Atlantic region, and the Northeast. Freezing rain fell in North Carolina. Rainfall and drizzle occurred along the central gulf coast. Rain and snow with high winds invaded the Pacific coastal regions.

MONDAY...Cold air continued moving south, reaching almost to the gulf coast and to the Appalachian Mountains. Minnesota, Iowa, and Wisconsin experienced subzero temperatures. Snowfall was scattered from the Great Lakes across the Ohio Valley, New York State, New England, and the Middle Atlantic States. Rainshowers were scattered across California.

TUESDAY...A major winter storm began to develop in the Southwest, spreading snow across Arizona, New Mexico, the central Rockies, and the High Plains. Cold weather continued in the northern and central Plains, the Mississippi Valley, and the Great Lakes. Temperatures remained below zero all day from the northern Plains to the Great Lakes. Snow showers occurred in the Great Lakes region. Moderate to heavy snow fell in Ohio, Pennsylvania, and New York, accompanied by strong gusty winds.

WEDNESDAY...The winter storm that began on Tuesday continued developing as it moved into Texas, Oklahoma, and Colorado producing heavy snow in southern Kansas, Oklahoma, and Arkansas. Snow also fell in Utah, Colorado, and Missouri. Freezing rain laid a sheet of ice across parts of Texas, Louisiana, and Mississippi.

THURSDAY...Snow continued spreading eastward across the lower Mississippi Valley, Kentucky, Tennessee, West Virginia, Virginia, Georgia, and the Carolinas. Snow ended at noon at Oklahoma City, after 45 consecutive hours of snowfall which produced an accumulation of over 12 inches--an all-time record at this station for a single snowstorm. Freezing drizzle and rain fell in New Mexico, Texas, Arkansas, Mississippi, Arkansas, Alabama, Georgia, and the Carolinas. Sleet was mixed with snow and freezing rain across much of the Southeast.

FRIDAY...The storm that caused snow, sleet, and freezing rain from the southern Plains to the Middle Atlantic region Tuesday-Thursday continued moving northeastward, spreading snow into Pennsylvania, New York, New Jersey, and New England.

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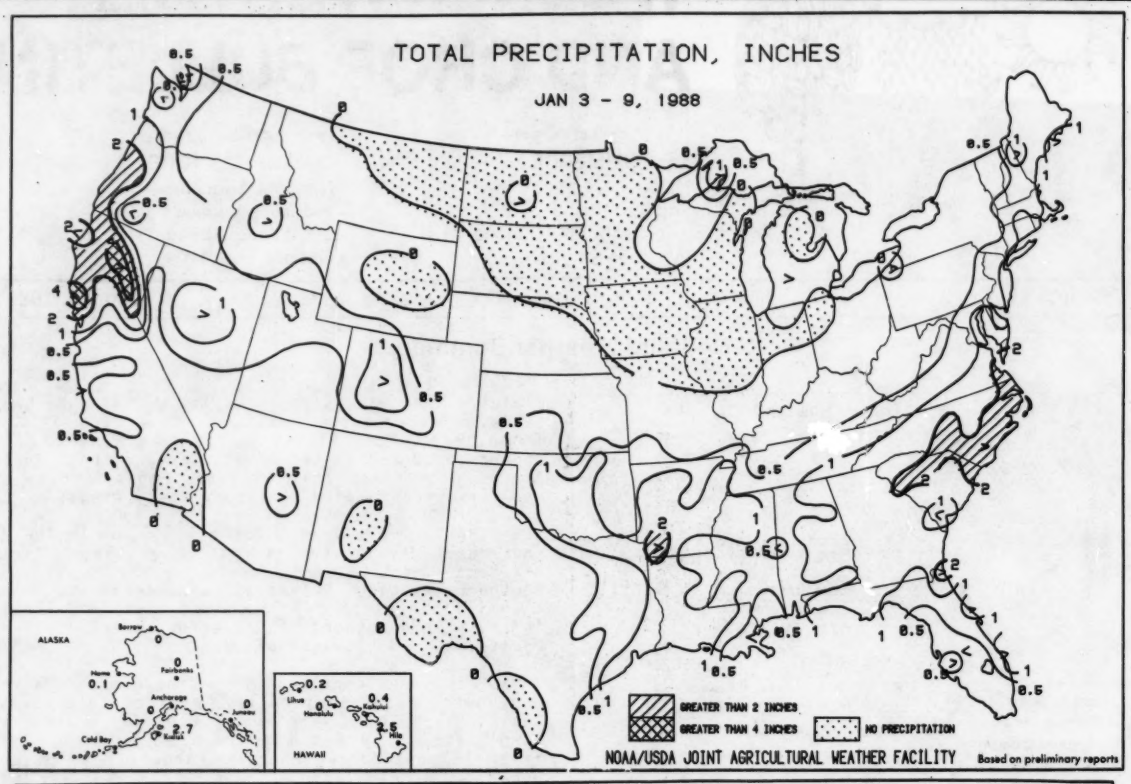
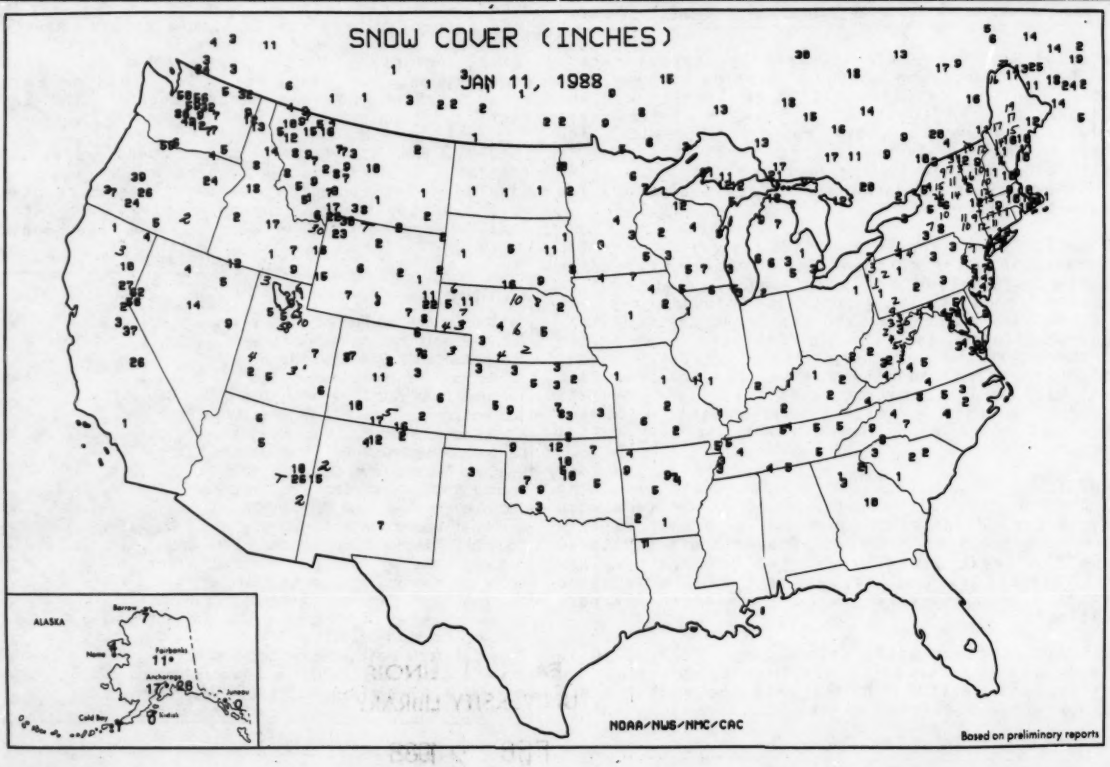
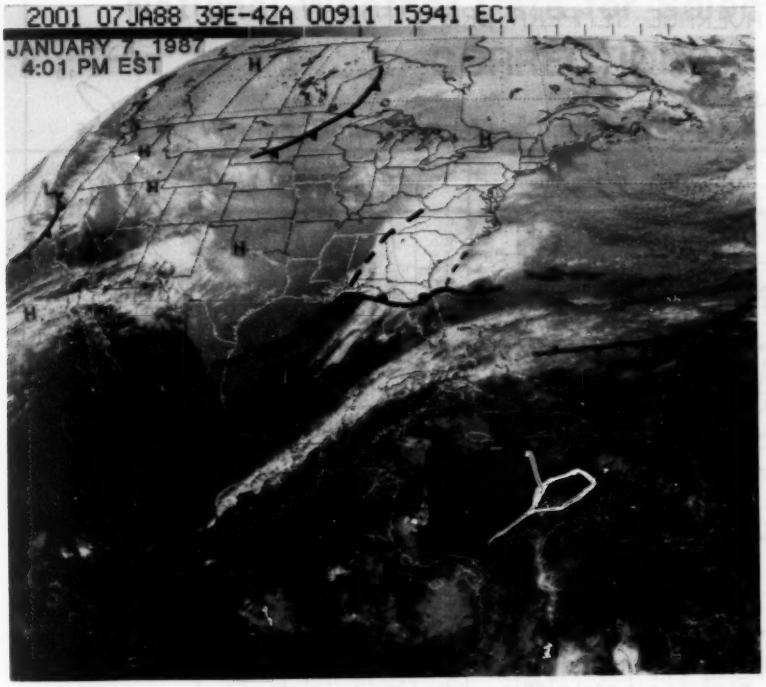
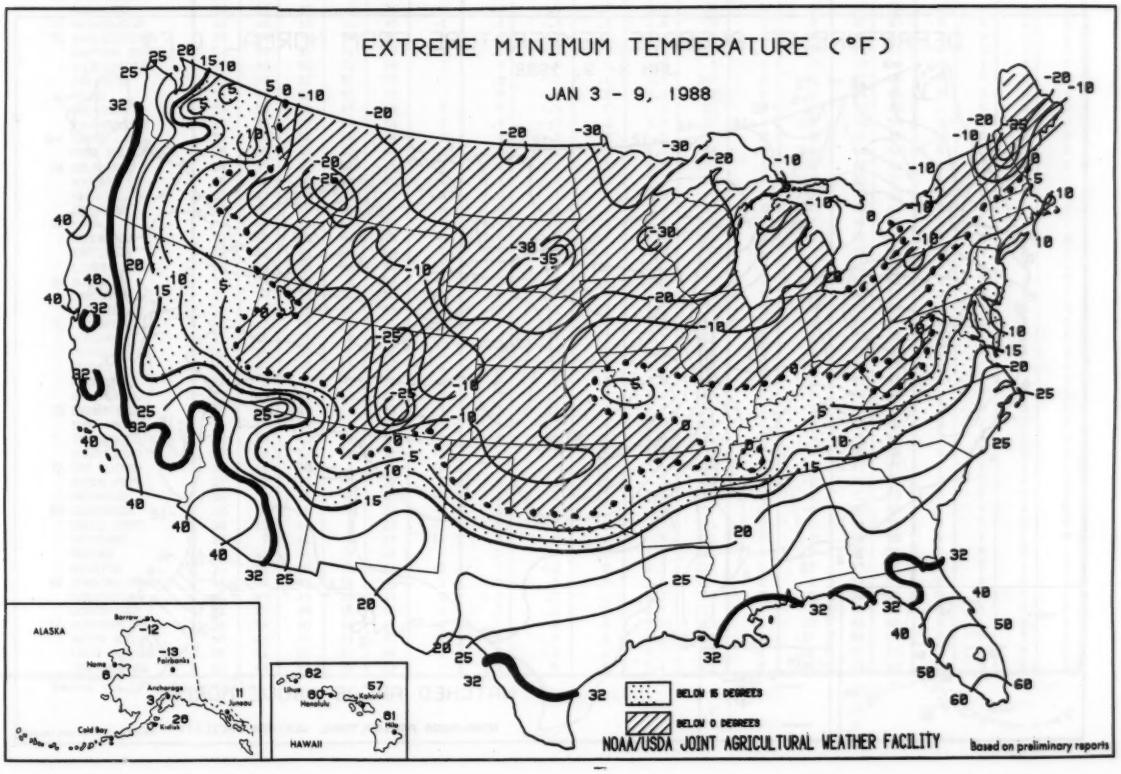
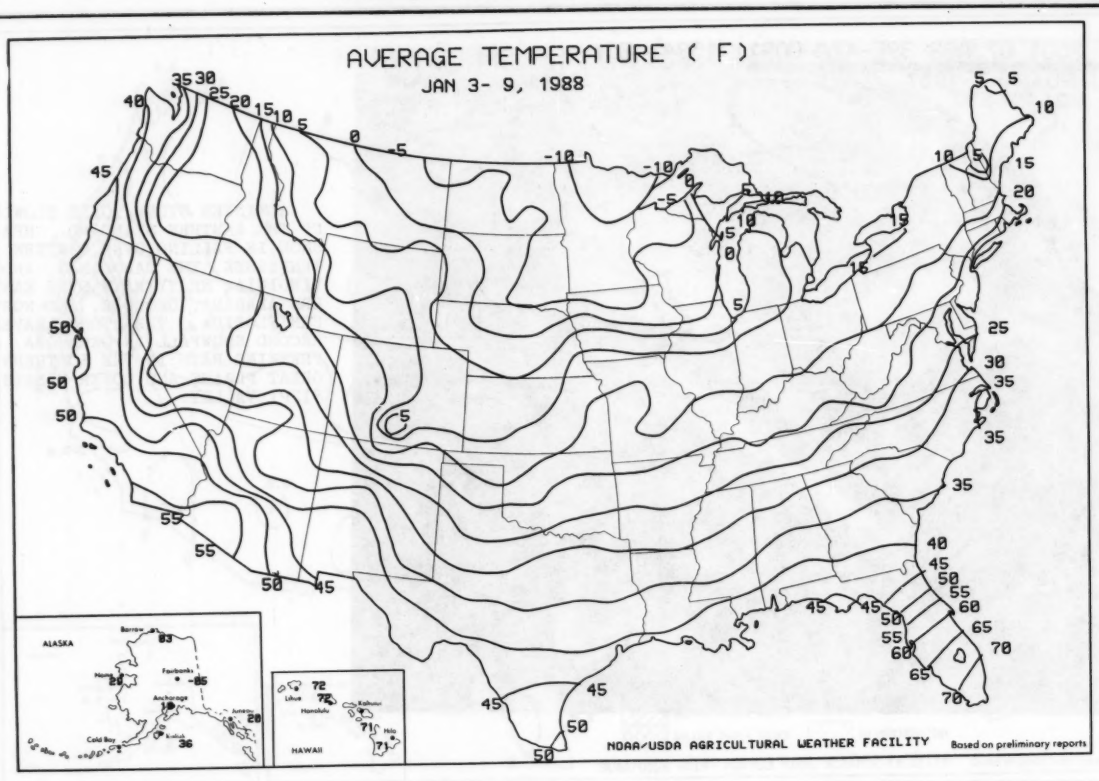

TOTAL PRECIPITATION, INCHES
JAN 3 - 9, 1988
ALASKA
HAWAII
GREATER THAN 2 INCHES
GREATER THAN 4 INCHES
NO PRECIPITATION
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

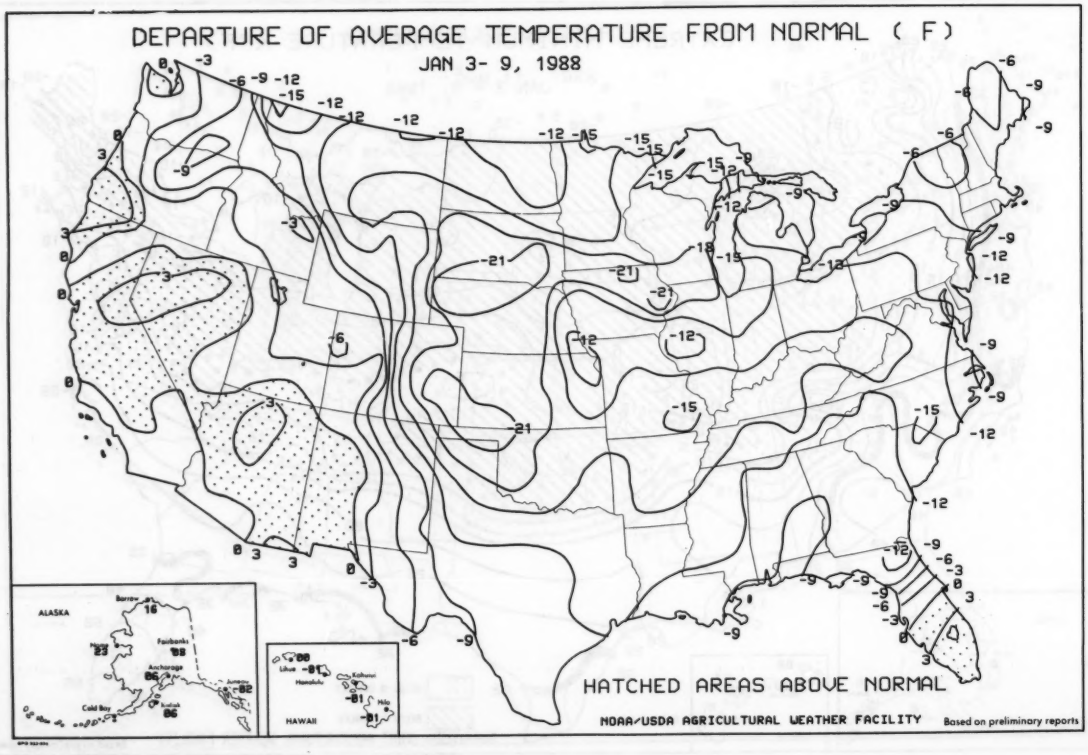

SNOW COVER (INCHES)
JAN 11, 1988
ALASKA
NOAA/NWS/NMC/CAC
Based on preliminary reports



A WINTER STORM MOVES SLOWLY UP THE EASTERN SEABOARD. HEAVY SNOW IS FALLING OVER EASTERN TENNESSEE, THE CAROLINAS, AND VIRGINIA; HEAVY RAIN OVER EASTERN ALABAMA, GEORGIA, AND NORTHERN FLORIDA. THE STORM LEAVES RECORD SNOWFALL IN OKLAHOMA, AND FREEZING RAIN IN THE SOUTHERN GREAT PLAINS AND LOWER MISSISSIPPI VALLEY.




AVERAGE TEMPERATURE (F)
JAN 3- 9, 1988
ALASKA
HAWAII
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (F)
JAN 3- 9, 1988
HATCHED AREAS ABOVE NORMAL
ALASKA
HAWAII
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

National Weather Data for Selected Cities

CORRECTIONS

Weather Data for the Week Ending January 2, 1988

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	55	36	64	24	46	2	1.3	.2	.5	3.5	67	.5	137	95	57	0	3	3	1
MOBILE	60	43	76	30	52	0	1.5	.3	.7	4.0	70	.4	131	95	63	0	1	4	1
MONTGOMERY	61	40	80	24	51	3	2.0	.9	1.2	5.6	110	1.3	445	92	55	0	2	5	1
AK ANCHORAGE	25	14	35	8	20	7	T	-.2	T	1.1	100	0	0	95	80	0	7	1	0
BARROW	14	-6	29	-36	4	18	T	0	T	.2	140	T	100	91	78	0	7	1	0
FAIRBANKS	11	-6	20	-20	3	15	.2	0	.1	.5	70	T	75	88	78	0	7	3	0
JUNEAU	29	21	36	15	25	2	T	-.9	T	5.3	109	0	0	95	72	0	6	1	0
KODIAK	37	23	40	16	30	1	.3	-1.0	.3	2.4	40	T	5	94	71	0	6	2	0
NOME	31	21	34	5	26	22	1.0	.8	.5	1.4	207	.2	420	98	81	0	7	6	1
AZ PHOENIX	61	38	71	31	50	-2	0	-.2	0	1.6	186	0	0	63	24	0	1	0	0
PRESCOTT	46	19	54	9	32	-3	0	-.4	0	.7	39	0	0	75	27	0	6	0	0
TUCSON	62	34	75	24	48	-3	0	-.2	0	1.5	152	0	0	75	24	0	2	0	0
YUMA	60	40	63	32	50	-5	0	-.1	0	.6	177	0	0	48	22	0	1	0	0
AR FORT SMITH	45	25	50	18	35	-3	.2	-.3	.2	8.1	274	0	0	92	53	0	7	1	0
LITTLE ROCK	42	30	49	23	36	-5	.6	-.3	.3	13.7	307	0	0	83	64	0	5	3	0
CA BAKERSFIELD	50	32	57	25	41	-6	.1	-.1	.1	.8	120	0	0	91	52	0	3	2	0
EUREKA	52	40	57	34	46	-1	1.6	.1	.5	11.2	168	.3	61	87	60	0	0	5	1
FRESNO	47	31	51	26	39	-5	.7	.3	.4	1.2	69	T	0	95	64	0	4	3	0
LOS ANGELES	60	41	67	37	50	-6	.2	-.3	.2	1.8	101	0	0	73	34	0	0	1	0
REDDING	45	29	51	25	37	-9	1.6	-.2	.8	9.3	123	.2	44	97	62	0	5	4	1
SACRAMENTO	47	35	49	29	41	-3	.7	-.1	.6	3.2	102	.1	21	98	63	0	3	4	1
SAN DIEGO	60	41	63	37	51	-6	.1	-.4	.1	2.7	134	0	0	74	32	0	0	2	0
SAN FRANCISCO	50	41	54	36	45	-3	1.2	.2	.4	4.7	123	.2	62	96	68	0	0	4	0
CO DENVER	33	3	40	-6	18	-12	.6	.5	.5	1.3	232	0	0	89	48	0	7	2	1
GRAND JUNCTION	29	6	33	-4	17	-8	.1	-.1	.1	.8	136	0	0	92	59	0	7	1	0
PUEBLO	30	-2	42	-15	14	-16	.1	0	.1	.4	135	0	0	97	57	0	7	1	0
CT BRIDGEPORT	32	20	41	6	26	-5	.2	-.6	.1	2.2	55	.1	35	71	38	0	6	3	0
HARTFORD	32	14	47	0	23	-3	.3	-.6	.3	1.6	36	T	0	77	39	0	7	3	0
DC WASHINGTON	42	28	55	21	35	-1	.4	-.3	.4	2.6	77	T	0	81	47	0	4	2	0
FL APALACHICOLA	65	48	76	35	57	3	.1	-.7	.1	1.0	27	.1	48	90	62	0	0	1	0
DAYTONA BEACH	74	50	81	41	62	4	.1	-.4	.1	.3	14	.1	43	95	52	0	0	1	0
JACKSONVILLE	69	46	80	31	58	3	T	-.6	T	.2	6	0	0	93	52	0	1	0	0
KEY WEST	75	65	81	57	70	0	.2	-.1	.1	2.9	160	.2	160	91	64	0	0	4	0
MIAMI	77	62	83	51	70	2	T	-.4	T	4.3	217	T	0	84	49	0	0	0	0
ORLANDO	75	54	81	47	65	4	T	-.4	T	.5	25	T	0	94	48	0	0	0	0
TALLAHASSEE	65	43	77	26	54	2	.4	-.7	.2	1.3	27	.3	100	96	59	0	2	3	0
TAMPA	75	52	80	38	63	3	T	-.5	T	.5	22	0	0	93	49	0	0	0	0
WEST PALM BEACH	75	61	83	50	68	2	.6	.1	.5	2.0	84	.6	344	88	53	0	0	3	0
GA ATLANTA	55	37	63	27	46	4	1.6	.5	.6	4.6	102	.5	155	88	55	0	1	4	2
AUGUSTA	60	38	70	23	49	4	1.1	.3	.8	2.3	68	.9	388	93	57	0	3	3	1
MACON	62	42	78	27	52	5	1.0	.1	.5	2.6	60	.7	257	93	54	0	2	3	0
SAVANNAH	66	43	79	27	54	5	1.0	.3	.6	1.8	62	.4	210	89	53	0	1	2	1
HI HILO	78	66	83	63	72	1	4.0	1.6	3.0	25.3	188	3.1	497	96	69	0	0	7	1
HONOLULU	79	67	84	64	73	0	2.6	1.8	1.7	18.1	496	.9	344	92	63	0	0	4	2
KAHULUI	79	63	84	60	71	-1	5.6	4.9	4.1	11.2	376	5.6		92	63	0	0	2	2
LIHUE	76	66	80	62	71	-1	1.3	-.1	.9	12.0	205	1.2	276	92	69	0	0	4	1
ID BOISE	32	13	42	0	23	-7	.3	-.1	.1	1.1	74	0	0	95	62	0	7	3	0
LEWISTON	28	20	35	14	24	-9	T	-.3	T	.8	58	0	0	84	66	0	7	0	0
POCATELLO	25	1	35	-14	13	-11	.3	.1	.2	1.2	121	T	0	96	67	0	7	3	0
IL CHICAGO	30	12	39	-1	21	-1	.7	.2	.7	3.8	151	0	0	88	67	0	7	2	1
MOLINE	31	15	37	2	23	1	1.1	.7	.7	4.5	219	0	0	91	68	0	7	2	1
PEORIA	32	19	38	5	26	2	.8	.3	.6	4.2	194	0	0	91	64	0	7	2	1
QUINCY	35	21	39	11	28	2	1.1	.8	1.1	3.8	209	0	0	86	58	0	7	2	1
ROCKFORD	28	8	35	-5	18	-2	.9	.5	.8	4.0	202	0	0	91	61	0	7	2	1
SPRINGFIELD	35	23	40	12	29	2	.7	.3	.7	5.0	223	0	0	86	64	0	6	2	1
IN EVANSVILLE	40	26	47	14	33	1	1.1	.4	.4	5.7	155	0	0	94	63	0	6	3	0
FORT WAYNE	30	16	38	6	23	-2	.4	-.1	.4	3.5	134	0	0	88	62	0	7	2	0
INDIANAPOLIS	35	22	42	9	29	1	.6	0	.4	4.8	151	0	0	90	60	0	6	3	0
SOUTH BEND	29	12	37	2	21	-5	.6	-.1	.6	4.1	133	T	0	89	59	0	7	1	1
IA DES MOINES	29	14	36	1	21	0	.7	.5	.5	2.6	238	0	0	91	67	0	7	2	1
SIOUX CITY	27	12	35	-4	19	1	.2	.1	.2	.5	62	0	0	90	66	0	7	3	0
WATERLOO	26	5	35	-9	16	-2	.3	.1	.2	1.8	153	0	0	92	70	0	7	2	0
KS CONCORDIA	30	14	38	5	22	-5	.2	0	.2	.8	107	0	0	86	62	0	7	1	0
DODGE CITY	34	12	44	3	23	-8	T	-.1	T	.7	133	0	0	91	59	0	7	0	0
GOODLAND	29	7	40	1	18	-10	T	0	T	.5	112	0	0	86	58	0	7	1	0
TOPEKA	35	21	41	11	28	0	.2	0	.2	1.9	141	0	0	87	59	0	7	2	0
WICHITA	30	16	35	9	23	-8	T	-.2	T	2.3	221	0	0	95	67	0	7	1	0
KY BOWLING GREEN	44	28	53	18	36	1	1.1	0	.5	7.0	144	T	0	97	59	0	5	4	1
LEXINGTON	40	25	49	13	33	0	1.0	.1	.5	6.2	154	T	0	92	52	0	5	4	1
LOUISVILLE	41	27	48	16	34	0	.9	.2	.4	4.7	127	0	0	89	50	0	5	3	0
LA ALEXANDRIA	54	39	60	32	46	-2	.7	-.4	.4	7.9	152	.1	20	83	62	0	1	3	0
BATON ROUGE	59	41	77	33	50	-1	.9	-.2	.6	4.4	84	.6	187	94	59	0	0	3	1
LAKE CHARLES	56	41	65	34	48	-3	.5	-.6	.4	5.3	98	.4	109	93	63	0	0	3	0
NEW ORLEANS	60	46	77	38	53	0	1.2	0	.6	3.6	65	.8	244	93	64	0	0	4	1

Based on 1951-80 normals.

CORRECTIONS

Weather Data for the Week Ending January 2, 1988

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	49	34	55	27	42	-5	1.1	.2	.5	8.1	195	T	0	92	57	0	3	3	1
ME CARIBOU	15	-2	34	-13	7	-5	T	-.6	T	2.6	78	T	18	87	63	0	7	2	0
PORTLAND	29	12	45	0	21	-2	.1	-.8	.1	2.0	42	0	0	74	40	0	7	1	0
MD BALTIMORE	41	25	53	17	33	-1	.4	-.3	.3	2.1	58	T	0	82	41	0	4	2	0
SALISBURY	45	25	54	16	35	-1	.6	-.3	.4	3.2	81	T	0	84	46	0	5	2	0
MA BOSTON	34	18	48	3	26	-4	.3	-.7	.3	2.1	45	0	0	72	38	0	7	2	0
CHATHAM	33	23	40	8	28	-5	1.3	.2	1.3	4.2	81	0	0	81	57	0	6	1	1
MI ALPENA	28	13	36	2	20	0	T	-.4	T	2.2	105	T	17	87	58	0	7	1	0
DETROIT	30	14	39	1	22	-3	.7	.2	.7	4.6	173	T	0	85	59	0	7	1	1
FLINT	30	15	38	7	23	-1	T	-.4	T	2.5	121	T	0	82	57	0	7	1	0
GRAND RAPIDS	29	13	37	0	21	-3	.4	-.1	.3	3.4	124	.1	53	88	60	0	7	3	0
HOUGHTON LAKE	27	12	38	1	19	0	T	-.4	T	2.5	123	T	0	87	62	0	7	0	0
LANSING	30	12	43	-3	21	-2	.3	-.2	.3	3.4	132	T	0	86	60	0	7	1	0
MARQUETTE	24	6	33	-4	15	-5	.1	-.3	.1	3.6	163	T	0	93	73	0	7	2	0
MUSKEGON	31	16	38	6	24	-2	.2	-.4	.2	4.2	154	T	12	82	57	0	7	2	0
SAULT ST. MARIE	24	6	34	-1	15	0	.4	-.1	.2	3.3	122	.2	150	89	61	0	7	3	0
MN ALEXANDRIA	21	5	28	-8	13	5	.1	0	.1	.7	85	T	0	97	76	0	7	2	0
DULUTH	22	6	30	-15	14	5	.1	-.2	.1	.7	48	T	0	90	65	0	7	2	0
INT'L FALLS	19	5	27	-18	12	9	.1	-.1	.1	.2	22	T	17	92	74	0	7	3	0
MINNEAPOLIS	24	7	34	-9	16	2	.1	-.1	.1	1.3	139	0	0	86	66	0	7	1	0
ROCHESTER	22	3	34	-12	13	0	.3	.1	.2	1.8	186	0	0	91	73	0	7	2	0
MS GREENWOOD	52	36	62	27	44	0	2.7	1.4	2.2	4.5	78	.2	43	93	57	0	3	3	1
JACKSON	54	38	67	28	46	0	1.2	-.1	.4	3.9	69	.4	120	96	64	0	3	4	0
MERIDIAN	56	38	66	26	47	1	1.1	-.3	.6	4.7	78	.2	63	97	58	0	3	4	1
MO CAPE GIRARDEAU	42	28	47	17	35	--	1.1	.3	.9	8.2	207	0	0	93	62	0	5	3	1
COLUMBIA	35	21	40	10	28	-1	1.1	.7	1.1	5.5	260	0	0	90	60	0	7	1	1
KANSAS CITY	35	20	40	8	28	-2	.4	0	.3	2.1	132	0	0	96	64	0	7	2	0
SAINT LOUIS	37	25	44	15	31	1	1.7	1.2	1.7	7.5	322	0	0	86	59	0	6	2	1
SPRINGFIELD	37	21	41	10	29	-4	.4	-.1	.4	7.5	280	0	0	92	57	0	7	1	0
MT BILLINGS	30	10	47	4	20	-4	.1	-.1	.1	.3	39	T	17	85	46	0	7	3	0
GLASGOW	25	3	36	-9	14	3	T	-.1	T	T	9	T	0	86	56	0	7	1	0
GREAT FALLS	30	10	46	-11	20	-2	.1	-.1	.1	.2	29	T	0	82	47	0	7	2	0
HAVRE	24	-3	33	-19	11	-4	T	-.1	T	.1	9	0	0	84	53	0	7	1	0
HELENA	22	-1	31	-9	10	-10	T	-.1	T	.4	64	T	0	95	63	0	7	3	0
KALISPELL	21	6	24	-7	13	-8	.1	-.2	.1	1.6	96	T	18	91	73	0	7	2	0
MILES CITY	29	4	41	-11	16	0	.1	-.1	.1	.1	12	0	0	79	48	0	7	1	0
MISSOULA	16	3	23	-4	10	-13	.1	-.2	.1	1.1	88	T	0	92	75	0	7	2	0
NE GRAND ISLAND	25	9	36	-6	17	-6	.3	.2	.3	.8	117	0	0	89	70	0	7	2	0
LINCOLN	30	15	39	3	23	1	.3	.2	.3	.7	104	0	0	91	63	0	7	1	0
NORFOLK	24	9	33	-9	16	-3	.3	.2	.3	.8	122	0	0	91	68	0	7	1	0
NORTH PLATTE	25	2	34	-7	13	-10	.4	.3	.4	.8	188	0	0	93	65	0	7	1	0
OMAHA	29	15	35	2	22	-1	.3	.1	.3	.8	95	0	0	82	64	0	7	3	0
SCOTTSBLUFF	22	-3	28	-11	10	-15	.5	.4	.5	1.0	194	0	0	90	63	0	7	2	0
VALENTINE	21	-2	32	-17	10	-11	1.6	1.5	1.6	1.8	670	0	0	91	62	0	7	2	1
NV ELY	31	-2	37	-13	15	-10	.2	0	.2	.7	86	0	0	83	43	0	7	2	0
LAS VEGAS	48	27	51	24	37	-6	0	-.1	0	.9	287	0	0	74	28	0	6	0	0
RENO	34	12	37	4	23	-8	.1	-.2	.1	.6	46	T	0	92	56	0	7	1	0
WINNEMUCCA	34	7	38	0	20	-9	T	-.2	T	.7	76	0	0	90	53	0	7	1	0
NH CONCORD	29	9	44	-2	19	-3	.1	-.6	.1	1.6	43	0	0	78	40	0	7	1	0
NJ ATLANTIC CITY	40	20	53	7	30	-4	.3	-.5	.1	2.3	59	.1	26	90	47	0	6	3	0
NM ALBUQUERQUE	38	16	44	10	27	-7	T	-.1	T	.3	65	0	0	78	34	0	7	0	0
CLOVIS	42	20	57	6	31	-6	T	-.1	T	1.8	285	0	0	75	44	0	7	0	0
ROSWELL	42	19	46	-3	30	-9	T	-.1	T	1.4	356	T	0	89	49	0	7	0	0
NY ALBANY	29	11	39	-1	20	-3	.2	-.4	.2	1.6	52	0	0	83	47	0	7	2	0
BINGHAMTON	27	10	37	0	18	-4	.6	0	.4	2.2	71	T	0	92	53	0	7	2	0
BUFFALO	31	16	42	8	23	-2	.3	-.4	.2	2.8	78	T	10	89	54	0	7	3	0
NEW YORK	37	23	46	10	30	-3	.4	-.4	.4	2.3	59	T	0	79	46	0	6	2	0
ROCHESTER	31	12	41	0	22	-4	.2	-.3	.2	2.0	72	T	0	87	52	0	7	2	0
SYRACUSE	30	12	41	0	21	-4	.2	-.4	.2	2.0	59	T	0	84	49	0	7	3	0
NC ASHEVILLE	48	32	54	21	40	2	.5	-.2	.2	2.5	73	.1	70	93	61	0	4	4	0
CHARLOTTE	50	36	56	26	43	2	1.3	.5	.7	3.9	108	.5	217	90	57	0	3	4	1
GREENSBORO	46	33	54	24	39	1	1.2	.4	.4	3.7	104	.3	148	86	57	0	4	4	0
HATTERAS	53	38	68	24	46	-1	1.5	.4	1.0	2.5	54	.3	97	95	63	0	2	5	1
NEW BERN	56	38	73	25	47	2	1.8	.9	1.0	3.9	99	.4	140	91	56	0	2	4	1
RALEIGH	48	34	62	25	41	1	1.4	.6	.6	3.5	104	.5	205	90	59	0	4	4	1
WILMINGTON	59	39	72	28	49	2	.8	0	.4	1.6	44	.3	117	94	60	0	2	4	0
ND BISMARCK	26	3	38	-8	15	5	T	-.1	T	.1	25	T	0	86	59	0	7	1	0
FARGO	19	6	26	-9	13	5	.3	.1	.2	.7	106	T	0	91	74	0	7	2	0
GRAND FORKS	19	1	25	-12	10	5	.1	0	.1	.4	55	T	0	89	75	0	7	2	0
WILLISTON	24	-1	36	-13	12	1	T	-.1	T	.1	13	T	0	86	57	0	7	0	0
OH AKRON-CANTON	33	19	40	7	26	-1	.3	-.4	.2	2.3	82	0	0	90	52	0	7	3	0
CINCINNATI	37	21	44	8	29	-2	.6	.1	.5	3.4	108	0	0	90	52	0	6	4	0
CLEVELAND	32	19	40	7	25	-3	.5	-.1	.4	3.0	102	T	0	91	53	0	7	3	0
COLUMBUS	35	20	43	9	28	-1	.5	-.1	.3	2.9	104	0	0	87	51	0	6	3	0

Based on 1951-80 normals.

CORRECTIONS

Weather Data for the Week Ending January 2, 1988

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	34	19	42	7	27	-2	.2	-.3	.1	3.0	114	0	0	87	54	0	7	3	0
TOLEDO	30	13	39	2	22	-4	.4	-.2	.4	3.8	138	T	0	90	61	0	7	2	0
YOUNGSTOWN	32	18	39	7	25	-1	.4	-.2	.2	2.7	93	T	0	91	57	0	7	4	0
OK OKLAHOMA CITY	35	23	39	19	29	-8	T	-.2	T	3.8	305	0	0	93	63	0	7	0	0
TULSA	37	24	42	18	31	-6	T	-.3	T	5.9	311	0	0	88	55	0	7	1	0
OR ASTORIA	45	32	49	27	39	-3	.3	-2.4	.3	8.9	72	0	0	90	58	0	4	2	0
BURNS	28	6	31	-7	17	-9	.5	.1	.4	2.1	117	0	0	***	***	0	7	4	0
MEDFORD	42	28	54	22	35	-2	.1	-.8	.1	3.8	102	T	0	92	64	0	6	1	0
PENDLETON	24	17	29	12	21	-13	T	-.4	T	1.2	70	0	0	97	84	0	7	1	0
PORTLAND	39	28	42	22	33	-6	.2	-1.3	.1	8.0	117	0	0	88	57	0	6	4	0
SALEM	39	26	43	19	33	-7	1.3	-.4	1.0	10.9	144	0	0	97	74	0	6	4	1
PA ALLENTOWN	32	17	40	5	24	-4	.2	-.6	.1	1.5	38	T	4	87	49	0	7	3	0
ERIE	32	22	40	17	27	0	.2	-.4	.2	3.4	99	T	0	85	54	0	7	3	0
HARRISBURG	34	20	42	11	27	-4	.3	-.4	.3	1.8	53	0	0	91	53	0	7	2	0
PHILADELPHIA	37	22	48	13	30	-3	.2	-.6	.1	1.7	47	T	5	84	47	0	6	3	0
PITTSBURGH	36	19	43	9	28	-1	.4	-.3	.2	2.4	88	T	5	94	53	0	7	4	0
SCRANTON	29	13	41	2	21	-6	.2	-.3	.1	1.0	38	0	0	92	55	0	7	3	0
RI PROVIDENCE	34	17	48	4	26	-4	.3	-.7	.2	2.3	48	.1	25	77	41	0	6	2	0
SC CHARLESTON	63	42	73	30	52	4	.5	-.2	.4	1.7	52	.1	62	96	55	0	2	2	0
COLUMBIA	57	37	70	21	47	2	.9	0	.5	2.2	59	.7	270	96	52	0	3	4	0
FLORENCE	59	38	74	25	48	3	.8	.1	.7	2.5	79	.2	45	94	56	0	3	3	1
GREENVILLE	50	36	56	22	43	2	1.7	.8	.6	5.1	119	.5	186	92	57	0	2	4	2
SD ABERDEEN	22	2	29	-14	12	1	.1	-.1	.1	.1	17	0	0	92	69	0	7	1	0
HURON	19	2	28	-17	11	-3	.9	.8	.7	1.3	242	0	0	91	75	0	7	3	1
RAPID CITY	29	8	40	-7	18	-5	.2	.2	.2	.3	67	0	0	82	51	0	7	1	0
SIOUX FALLS	21	3	31	-17	12	-3	.6	.5	.6	1.4	189	0	0	91	74	0	7	2	1
TN CHATTANOOGA	50	34	56	23	42	3	1.0	-.2	.6	3.5	63	.2	63	90	52	0	3	4	1
KNOXVILLE	50	32	56	20	41	2	1.8	.7	.9	3.9	79	.4	116	96	60	0	4	4	1
MEMPHIS	48	34	60	26	41	0	2.0	.9	1.5	11.4	222	T	0	88	60	0	4	2	1
NASHVILLE	48	31	58	20	39	1	.8	-.3	.4	5.5	112	T	10	96	53	0	4	4	0
TX ABILENE	43	24	51	17	33	-11	0	-.2	0	4.6	489	0	0	89	49	0	7	0	0
AMARILLO	37	16	55	6	26	-10	0	-.1	0	1.8	337	0	0	92	52	0	7	0	0
AUSTIN	50	34	65	29	42	-8	.2	-.3	.1	1.4	65	.1	80	86	46	0	4	2	0
BEAUMONT	58	37	68	10	47	-5	1.0	0	.5	6.7	129	.5	179	90	57	0	1	2	2
BROWNSVILLE	60	45	73	41	52	-8	1.0	.7	.6	1.3	111	.9		88	62	0	0	3	1
CORPUS CHRISTI	57	42	78	34	50	-6	.2	-.1	.1	1.1	87	.2	233	88	55	0	0	3	0
DEL RIO	53	32	66	26	43	-8	T	-.1	T	.6	107	T	0	75	32	0	4	0	0
EL PASO	49	23	64	14	36	-8	T	-.1	T	2.9	736	T	0	89	36	0	6	0	0
FORT WORTH	44	29	48	26	36	-9	T	-.4	T	2.9	158	0	0	86	49	0	6	0	0
GALVESTON	55	45	65	38	50	-5	1.2	.5	.8	2.6	68	.8	376	87	54	0	0	3	1
HOUSTON	53	39	65	32	46	-7	1.0	.1	.7	4.6	114	T	4	89	59	0	1	3	1
LUBBOCK	39	21	50	12	30	-9	0	-.1	0	1.1	279	0	0	91	60	0	7	0	0
MIDLAND	44	21	53	12	32	-12	0	-.1	0	.4	83	0	0	88	43	0	7	0	0
SAN ANGELO	45	24	53	18	35	-11	T	-.1	T	2.1	306	T	0	88	44	0	7	0	0
SAN ANTONIO	52	36	67	31	44	-7	T	-.3	T	2.2	151	T	0	81	43	0	2	0	0
VICTORIA	55	39	75	31	47	-6	.3	-.2	.3	1.9	83	T	17	92	55	0	1	2	0
WACO	47	31	60	28	39	-8	.2	-.2	.1	3.4	172	.1	118	91	55	0	4	2	0
WICHITA FALLS	40	24	48	19	32	-9	0	-.2	0	4.8	387	0	0	89	53	0	7	0	0
UT BLANDING	33	10	38	5	21	-6	T	-.3	T	.8	56	0	0	92	71	0	7	1	0
CEDAR CITY	31	1	40	-10	16	-14	.1	-.1	.1	1.1	154	0	0	100	59	0	7	1	0
SALT LAKE CITY	28	11	32	4	19	-9	T	-.3	T	1.1	77	T	0	90	63	0	7	1	0
VT BURLINGTON	26	10	40	-2	18	0	T	-.5	T	1.2	46	T	0	77	47	0	7	1	0
VA NORFOLK	48	34	66	25	41	0	1.1	.3	.6	2.7	78	.3	139	89	51	0	3	5	1
RICHMOND	46	30	57	16	38	0	.5	-.2	.4	2.9	81	.1	24	87	48	0	4	4	0
ROANOKE	44	29	51	20	36	0	.6	0	.3	2.1	69	0	0	84	49	0	4	2	0
WA QUILLAYUTE	45	31	48	20	38	-2	.6	-3.3	.3	11.7	63	0	0	99	67	0	5	3	0
SEATTLE-TACOMA	44	31	48	23	38	-2	.1	-1.4	.1	6.1	91	0	0	87	52	0	4	1	0
SPOKANE	22	4	27	-3	13	-14	T	-.6	T	4.9	186	T	0	94	83	0	7	1	0
YAKIMA	28	22	31	19	25	-4	.2	-.1	.2	3.3	241	T	0	94	77	0	7	2	0
WV BECKLEY	40	24	47	10	32	1	1.1	.3	5	4.5	136	.3	123	90	59	0	5	5	1
CHARLESTON	42	26	50	16	34	-1	.6	-.2	.2	4.3	122	.1	57	94	56	0	5	5	0
HUNTINGTON	42	25	50	15	33	-1	.5	-.2	.2	4.9	146	.1	29	89	54	0	5	5	0
PARKERSBURG	39	22	47	12	30	-2	.6	0	.4	3.2	110	T	0	94	54	0	5	3	0
WI GREEN BAY	27	8	35	-5	17	1	T	-.3	T	2.0	137	T	0	90	66	0	7	0	0
LACROSSE	28	9	37	-6	18	2	.2	0	.2	1.8	158	0	0	84	61	0	7	1	0
MADISON	27	7	35	-7	17	-1	.8	.5	.8	4.1	257	0	0	87	64	0	7	1	1
MILWAUKEE	29	14	36	-3	21	0	.5	.1	.5	5.4	252	0	0	91	69	0	7	1	1
WAUSAU	26	8	33	-11	17	3	.1	-.2	.1	1.5	111	0	0	87	59	0	7	1	0
WY CASPER	27	2	41	-9	14	-9	T	-.1	T	.6	121	0	0	85	53	0	7	2	0
CHEYENNE	30	6	43	-4	18	-10	.4	.3	.3	.9	218	T	0	81	46	0	7	2	0
LANDER	20	-1	32	-12	10	-11	T	-.1	T	.7	133	0	0	86	59	0	7	0	0
SHERIDAN	29	4	38	-4	16	-5	.1	-.1	.1	.3	42	T	0	86	52	0	7	1	0
PR SAN JUAN	84	73	86	70	78	1	1.0	.2	.4	8.4	181	.6	268	90	78	0	0	5	0

Based on 1951-80 normals.

Weather Data for the Week Ending January 9, 1988

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
AL BIRMINGHAM	36	27	46	22	32	-11	1.6	.4	1.3	5.1	79	2.1	132	91	60	0	6	2	1
MOBILE	47	34	53	28	41	-10	.9	-.2	.7	4.9	72	1.4	96	88	54	0	3	2	1
MONTGOMERY	43	33	52	27	38	-8	1.3	.3	.9	6.9	113	2.6	202	83	51	0	5	2	1
AK ANCHORAGE	24	13	31	3	18	7	0	-.2	0	1.1	84	0	0	91	78	0	7	0	0
BARROW	9	-4	26	-12	3	16	0	-.1	0	.2	105	T	29	88	79	0	7	0	0
FAIRBANKS	-1	-10	2	-13	-5	8	0	-.1	0	.5	59	T	17	87	72	0	7	0	0
JUNEAU	25	15	28	11	20	-2	0	-.9	0	5.3	92	0	0	96	82	0	7	0	0
KODIAK	40	32	42	26	36	6	2.7	1.4	1.0	5.1	70	2.7	163	99	81	0	3	5	3
NOME	35	23	42	6	29	23	.1	-.1	.1	1.5	172	.3	122	88	66	0	7	2	0
AZ PHOENIX	63	45	67	41	54	2	.1	-.1	.1	1.7	167	.1	55	81	40	0	0	2	0
PRESCOTT	51	27	60	22	39	4	.1	-.3	.1	.8	35	.1	12	77	34	0	6	1	0
TUCSON	66	39	75	34	52	2	.1	-.1	.1	1.6	137	.1	48	84	27	0	0	2	0
YUMA	65	46	69	40	55	0	T	-.1	T	.6	144	T	0	58	27	0	0	0	0
AR FORT SMITH	31	15	45	0	23	-14	1.3	.8	1.1	9.4	276	1.3	219	97	56	0	7	4	1
LITTLE ROCK	29	18	43	10	23	-17	.7	-.2	.6	14.5	269	.7	61	82	59	0	7	3	1
CA BAKERSFIELD	57	40	62	36	49	2	.3	.1	.2	1.2	129	.3	128	97	59	0	0	2	0
EUREKA	56	47	58	41	51	4	1.8	.2	.8	13.0	157	2.1	102	89	74	0	0	5	1
FRESNO	52	40	60	31	46	2	.8	.4	.5	2.0	92	.8	139	99	75	0	1	3	1
LOS ANGELES	62	48	67	43	55	-1	.2	-.4	.2	2.0	83	.2	26	86	49	0	0	1	0
REDDING	47	39	56	32	43	-3	4.7	2.8	1.5	14.0	147	5.0	199	99	83	0	1	6	4
SACRAMENTO	52	43	57	39	48	3	.7	-.2	.5	3.9	97	.8	67	99	76	0	0	3	1
SAN DIEGO	64	49	68	46	56	0	.1	-.4	.1	2.8	111	.1	8	88	49	0	0	1	0
SAN FRANCISCO	55	42	58	29	48	0	1.3	.2	.8	6.0	123	1.5	109	99	73	0	1	6	1
CO DENVER	23	-3	39	-12	10	-20	.1	0	.1	1.4	207	.1	71	89	53	0	7	2	0
GRAND JUNCTION	28	10	31	-4	19	-6	.8	.7	.4	1.6	216	.8	439	96	71	0	7	4	0
PUEBLO	21	-8	27	-15	6	-23	.3	.3	.3	.8	211	.3	486	96	67	0	7	2	0
CT BRIDGEPORT	26	14	37	7	20	-10	.9	.1	.5	3.0	64	.9	94	76	48	0	7	3	1
HARTFORD	26	10	34	2	18	-8	1.3	.5	.7	2.9	55	1.3	122	77	41	0	7	4	2
DC WASHINGTON	28	17	39	10	22	-13	1.0	.3	.4	3.6	89	1.0	117	84	45	0	7	4	0
FL APALACHICOLA	52	40	61	34	46	-7	1.0	.2	.5	2.0	45	1.1	110	88	61	0	0	3	0
DAYTONA BEACH	63	46	70	39	54	-4	1.2	.7	.7	1.6	55	1.3	202	97	76	0	0	4	1
JACKSONVILLE	49	35	57	30	42	-12	2.8	2.2	2.4	3.0	92	2.8	357	95	69	0	2	4	1
KEY WEST	78	66	83	63	72	2	.9	.5	.7	3.8	174	1.1	230	97	73	0	0	3	1
MIAMI	79	64	84	58	72	4	.4	0	.2	4.7	194	.4	72	94	64	0	0	4	0
ORLANDO	67	51	75	46	59	-1	.6	.1	.5	1.1	43	.6	102	93	70	0	0	2	0
TALLAHASSEE	48	35	56	28	41	-10	1.0	0	.4	2.4	40	1.3	99	93	59	0	3	3	0
TAMPA	69	50	80	43	60	0	.4	0	.4	.9	33	.4	72	95	64	0	0	2	0
WEST PALM BEACH	77	64	83	57	70	4	1.5	1.0	.6	3.6	119	2.1	282	95	70	0	0	6	2
GA ATLANTA	36	27	44	21	32	-10	1.5	.4	.8	6.1	108	1.9	137	85	50	0	5	2	2
AUGUSTA	41	28	56	22	35	-10	2.0	1.1	1.2	4.3	100	2.9	261	89	55	0	5	2	2
MACON	41	30	52	24	35	-11	2.0	1.0	1.4	4.6	87	2.7	218	90	57	0	5	2	2
SAVANNAH	43	31	53	27	37	-12	1.1	.4	.8	2.9	79	1.5	166	93	60	0	5	3	1
HI HILO	77	65	80	61	71	-1	2.5	.4	1.3	27.9	179	5.7	206	92	68	0	0	4	2
HONOLULU	79	65	82	60	72	-1	T	-.9	T	18.1	400	.9	76	83	54	0	0	0	0
KAHULUI	78	64	80	57	71	-1	.4	-.5	.4	11.6	299	6.1	532	86	58	0	0	2	0
LIHUE	76	67	78	62	72	0	.2	-1.3	.2	12.2	167	1.4	71	80	56	0	0	2	0
ID BOISE	32	19	37	1	25	-4	.4	0	.3	1.5	82	.4	85	95	74	0	6	4	0
LEWISTON	29	21	35	13	25	-7	.1	-.3	0	.9	50	.1	12	85	66	0	7	2	0
POCATELLO	26	12	36	-14	19	-4	.5	.3	.2	1.7	140	.5	163	98	79	0	7	6	0
IL CHICAGO	13	-5	30	-14	4	-17	T	-.4	T	3.8	129	T	0	77	51	0	7	0	0
MOLINE	11	-3	31	-10	4	-16	T	-.4	T	4.5	183	T	0	76	54	0	7	0	0
PEORIA	18	0	37	-9	9	-13	T	-.4	T	4.2	163	T	0	82	45	0	7	0	0
QUINCY	21	4	37	-5	13	-11	T	-.3	T	3.8	176	T	0	77	44	0	7	0	0
ROCKFORD	8	-11	28	-19	-2	-20	T	-.4	T	4.0	171	T	0	79	57	0	7	0	0
SPRINGFIELD	20	4	35	-5	12	-13	T	-.4	T	5.0	191	T	0	80	47	0	7	0	0
IN EVANSVILLE	23	9	32	2	16	-15	.1	-.6	.1	5.8	134	.1	15	80	47	0	7	1	0
FORT WAYNE	20	0	34	-6	10	-14	T	-.5	T	3.5	112	T	0	82	43	0	7	0	0
INDIANAPOLIS	21	4	33	-4	13	-14	T	-.6	T	4.8	127	T	2	84	43	0	7	1	0
SOUTH BEND	15	-3	31	-10	6	-18	.1	-.5	.1	4.2	114	.1	13	82	56	0	7	3	0
IA DES MOINES	12	-2	27	-10	5	-14	T	-.2	T	2.6	198	T	0	78	54	0	7	0	0
SIOUX CITY	11	-6	24	-16	3	-14	T	-.1	T	.5	52	T	0	81	57	0	7	0	0
WATERLOO	5	-11	24	-21	-3	-18	T	-.2	T	1.8	131	T	0	80	57	0	7	0	0
KS CONCORDIA	16	2	30	-5	9	-17	.2	0	.1	.9	108	.2	83	83	52	0	7	2	0
DODGE CITY	16	2	33	-12	9	-21	.8	.7	.6	1.5	234	.8	571	88	62	0	7	3	1
GOODLAND	17	-2	30	-13	8	-19	.1	.1	.1	.6	122	.1	127	90	58	0	7	2	0
TOPEKA	22	7	38	3	15	-12	T	-.2	T	1.9	121	T	4	80	44	0	7	1	0
WICHITA	19	5	33	-9	12	-18	.3	.1	.2	2.6	214	.3	143	91	58	0	7	3	0
KY BOWLING GREEN	26	12	37	3	19	-15	.2	-.9	.2	7.2	122	.2	16	91	57	0	7	1	0
LEXINGTON	24	10	42	1	17	-15	.1	-.7	.1	6.3	129	.1	9	85	47	0	7	2	0
LOUISVILLE	25	10	34	3	18	-15	.1	-.6	.1	4.8	109	.1	14	79	44	0	7	1	0
LA ALEXANDRIA	40	33	49	27	36	-12	1.0	-.1	.7	8.8	142	1.0	77	78	56	0	3	4	1
BATON ROUGE	46	34	53	29	40	-11	1.1	0	1.1	5.5	86	1.6	119	81	48	0	3	1	1
LAKE CHARLES	45	33	51	28	39	-12	1.4	.3	1.4	6.7	103	1.8	122	88	59	0	3	1	1
NEW ORLEANS	48	39	53	34	43	-9	.4	-.7	.4	4.1	61	1.2	84	83	56	0	0	2	0

Based on 1951-80 normals.

Weather Data for the Week Ending January 9, 1988

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
SHREVEPORT	38	26	49	20	32	-14	1.5	.5	1.1	9.6	188	1.5	123	95	54	0	7	3	1
ME CARIBOU	13	-4	25	-22	5	-6	.6	0	.5	3.2	81	.6	84	85	61	0	7	3	0
PORTLAND	25	7	33	-6	16	-6	.8	-.1	.4	2.8	50	.8	71	81	46	0	7	3	0
MD BALTIMORE	28	15	39	8	21	-12	1.0	.3	.6	3.1	72	1.0	114	76	45	0	7	4	1
SALISBURY	31	17	41	9	24	-11	1.0	.2	.5	4.2	88	1.0	96	86	46	0	7	4	1
MA BOSTON	29	15	34	7	22	-8	1.1	.2	.5	3.3	57	1.1	93	73	40	0	7	3	2
CHATHAM	32	19	38	11	26	-6	1.2	.2	.7	5.5	87	1.2	94	74	48	0	7	3	2
MI ALPENA	19	0	31	-10	10	-10	T	-.4	T	2.2	88	T	4	87	52	0	7	0	0
DETROIT	20	3	31	-3	11	-13	.1	-.4	0	4.6	149	.1	10	84	50	0	7	3	0
FLINT	19	1	32	-5	10	-12	T	-.4	T	2.6	104	T	6	84	53	0	7	2	0
GRAND RAPIDS	18	-4	30	-15	7	-16	.3	-.3	.2	3.6	112	.3	51	89	62	0	7	4	0
HOUGHTON LAKE	15	-1	30	-17	7	-11	T	-.4	T	2.5	104	T	0	86	58	0	7	0	0
LANSING	18	-3	30	-11	7	-14	.1	-.4	0	3.5	115	.1	9	84	59	0	7	2	0
MARQUETTE	9	-11	20	-17	-1	-19	T	-.4	T	3.6	136	T	0	97	62	0	7	0	0
MUSKEGON	18	4	35	-11	11	-13	.3	-.3	.1	4.5	135	.3	38	87	63	0	7	4	0
SAULT ST. MARIE	15	0	29	-12	7	-7	1.6	1.0	1.2	4.9	151	1.8	265	91	68	0	7	6	1
MN ALEXANDRIA	3	-16	15	-23	-7	-13	T	-.2	T	.7	69	T	0	87	63	0	7	0	0
DULUTH	-1	-19	15	-27	-10	-17	T	-.3	T	.7	40	T	0	78	50	0	7	0	0
INT'L FALLS	-3	-23	15	-34	-13	-14	T	-.2	T	.2	18	T	4	84	57	0	7	0	0
MINNEAPOLIS	5	-12	19	-18	-4	-15	T	-.2	T	1.3	116	T	4	79	51	0	7	1	0
ROCHESTER	0	-16	17	-24	-8	-18	T	-.2	T	1.8	155	T	0	83	64	0	7	0	0
MS GREENWOOD	35	24	46	16	30	-14	1.2	0	1.0	5.7	82	1.4	86	91	56	0	6	2	1
JACKSON	37	28	49	23	32	-13	.6	-.6	.5	4.5	65	1.0	64	85	59	0	6	2	0
MERIDIAN	39	29	50	24	34	-12	.9	-.3	.7	5.6	77	1.1	70	89	56	0	6	2	1
MO CAPE GIRARDEAU	27	12	37	4	19	--	.2	-.5	.2	8.4	180	.2	24	81	46	0	7	2	0
COLUMBIA	21	7	39	1	14	-15	.1	-.3	.1	5.6	219	.1	13	79	49	0	7	1	0
KANSAS CITY	21	6	36	3	13	-15	.1	-.2	.1	2.1	114	.1	13	83	49	0	7	1	0
SAINT LOUIS	22	8	38	2	15	-15	.1	-.3	.1	7.5	276	.1	12	78	47	0	7	1	0
SPRINGFIELD	23	6	37	-7	15	-17	.5	.1	.3	8.0	260	.5	96	82	49	0	7	2	0
MT BILLINGS	14	-4	27	-11	5	-16	.1	-.1	.1	.5	44	.2	54	81	57	0	7	2	0
GLASGOW	8	-15	16	-22	-3	-12	T	-.1	T	T	7	T	0	77	48	0	7	0	0
GREAT FALLS	17	-7	35	-13	5	-15	.1	-.1	.1	.4	34	.1	43	88	64	0	7	3	0
HAVRE	12	-15	27	-21	-2	-14	T	-.1	T	.1	7	T	0	73	44	0	7	0	0
HELENA	14	-6	22	-16	4	-14	.1	-.1	0	.5	57	.1	24	91	65	0	7	2	0
KALISPELL	16	-4	20	-18	6	-14	.1	-.3	.1	1.7	84	.2	32	88	67	0	7	2	0
MILES CITY	10	-16	22	-27	-3	-17	T	-.1	T	.1	10	T	0	69	45	0	7	0	0
MISSOULA	17	4	27	-13	10	-11	.1	-.2	.1	1.2	75	.1	21	93	73	0	7	2	0
NE GRAND ISLAND	10	-7	25	-11	2	-19	.1	0	.1	.9	113	.1	64	86	58	0	7	2	0
LINCOLN	17	0	32	-7	9	-11	T	-.1	T	.7	89	T	11	83	48	0	7	1	0
NORFOLK	9	-9	22	-20	0	-17	T	-.1	T	.8	105	T	7	85	58	0	7	1	0
NORTH PLATTE	13	-10	24	-19	2	-20	.1	0	.1	.9	173	.1	64	87	63	0	7	1	0
OMAHA	14	0	27	-8	7	-14	T	-.2	T	.8	79	T	0	72	49	0	7	0	0
SCOTTSBLUFF	12	-10	18	-22	1	-23	.1	-.1	0	1.1	170	.1	43	86	67	0	7	2	0
VALENTINE	8	-18	21	-30	-5	-23	T	-.1	T	1.8	548	T	0	77	52	0	7	0	0
NV ELY	37	14	41	2	25	1	1.0	.8	.4	1.6	174	1.0	462	94	62	0	7	6	0
LAS VEGAS	53	35	58	33	44	0	.1	0	.1	1.0	223	.1	54	83	38	0	0	2	0
RENO	43	26	55	19	35	3	.1	-.2	.1	.7	43	.1	22	92	54	0	7	1	0
WINNEMUCCA	36	21	40	9	29	0	1.0	.8	.4	1.7	154	1.0	400	95	71	0	5	7	0
NH CONCORD	22	4	29	-4	13	-8	.6	-.1	.3	2.1	49	.6	64	83	45	0	7	3	0
NJ ATLANTIC CITY	30	13	40	7	21	-12	1.3	.5	.7	3.5	76	1.3	130	82	51	0	7	4	1
NM ALBUQUERQUE	46	26	48	12	36	1	T	-.1	T	.4	57	T	8	77	36	0	5	1	0
CLOVIS	35	21	49	16	28	-9	.1	0	.1	1.9	253	.1	57	73	51	0	7	1	0
ROSWELL	38	25	57	22	32	-7	.2	.1	.1	1.6	338	.2	182	97	74	0	7	3	0
NY ALBANY	22	7	34	0	15	-7	.5	-.1	.3	2.1	56	.5	61	81	43	0	7	3	0
BINGHAMTON	19	5	29	-2	12	-10	.4	-.2	.3	2.6	71	.4	54	88	49	0	7	4	0
BUFFALO	23	10	32	5	17	-8	.1	-.7	0	2.9	66	.1	8	76	46	0	7	2	0
NEW YORK	28	18	39	10	23	-10	1.0	.2	.5	3.2	70	1.0	101	79	42	0	7	4	0
ROCHESTER	22	8	32	-3	15	-9	.1	-.4	.1	2.1	64	.1	17	78	50	0	7	2	0
SYRACUSE	21	7	33	-6	14	-10	.2	-.4	.1	2.2	56	.2	30	79	52	0	7	3	0
NC ASHEVILLE	32	19	41	14	25	-12	1.3	.6	1.0	3.8	92	1.4	157	84	51	0	7	2	1
CHARLOTTE	34	23	47	16	29	-12	1.6	.8	1.0	5.5	124	2.2	197	81	48	0	7	4	2
GREENSBORO	31	19	42	12	25	-13	1.1	.3	.5	4.8	109	1.4	136	82	47	0	7	4	0
HATTERAS	46	33	60	27	40	-6	2.3	1.2	1.1	4.8	83	2.6	183	90	61	0	3	3	2
NEW BERN	39	29	45	24	34	-10	3.1	2.2	1.9	7.0	145	3.5	301	87	51	0	5	3	2
RALEIGH	32	21	39	15	27	-13	1.5	.8	.8	5.0	122	2.0	197	85	49	0	7	4	2
WILMINGTON	39	29	44	24	34	-12	2.6	1.8	1.6	4.2	94	2.9	270	94	54	0	5	3	2
ND BISMARCK	5	-19	15	-27	-7	-14	T	-.1	T	.1	22	T	7	69	45	0	7	1	0
FARGO	1	-15	16	-21	-7	-12	T	-.1	T	.7	87	T	0	78	61	0	7	0	0
GRAND FORKS	1	-18	15	-26	-9	-11	T	-.2	T	.4	45	T	0	75	60	0	7	0	0
WILLISTON	6	-18	13	-26	-6	-14	T	-.1	T	.1	11	T	0	79	47	0	7	0	0
OH AKRON-CANTON	20	4	33	-4	12	-14	.1	-.5	.1	2.4	71	.1	14	83	52	0	7	3	0
CINCINNATI	22	6	36	-3	14	-16	.1	-.7	.1	3.5	90	.1	7	84	48	0	7	2	0
CLEVELAND	22	5	34	0	13	-13	T	-.6	T	3.0	86	T	4	82	50	0	7	1	0
COLUMBUS	23	6	35	-1	15	-13	T	-.6	T	2.9	86	T	4	83	46	0	7	2	0

Based on 1951-80 normals.

Weather Data for the Week Ending January 9, 1988

STATES AND STATIONS	TEMPERATURE °F						PRECIPITATION							RELATIVE HUMIDITY, PERCENT		NUMBER OF DAYS			
																TEMPERATURE °F		PRECIPITATION	
	AVERAGE MAXIMUM	AVERAGE MINIMUM	EXTREME HIGH	EXTREME LOW	AVERAGE	DEPARTURE FROM NORMAL	WEEKLY TOTAL, IN.	DEPARTURE FROM NORMAL	GREATEST IN 24-HOUR, IN.	TOTAL, IN., SINCE DEC. 1	PCT. NORMAL SINCE DEC. 1	TOTAL, IN., SINCE JAN. 1	PCT. NORMAL SINCE JAN. 1	AVERAGE MAXIMUM	AVERAGE MINIMUM	90 AND ABOVE	32 AND BELOW	.01 INCH OR MORE	.50 INCH OR MORE
DAYTON	22	4	35	-5	13	-15	T	-.6	T	3.0	93	T	1	82	45	0	7	1	0
TOLEDO	21	1	34	-4	11	-13	T	-.5	T	3.8	117	T	0	86	47	0	7	0	0
YOUNGSTOWN	19	3	31	-6	11	-14	.1	-.6	0	2.8	79	.1	10	87	53	0	7	2	0
OK OKLAHOMA CITY	26	13	44	-4	20	-16	1.1	.8	.7	4.8	332	1.1	379	92	60	0	7	3	1
TULSA	27	13	47	-5	20	-15	.8	.5	.6	6.7	303	.8	195	89	58	0	7	3	1
OR ASTORIA	44	35	54	32	40	-1	1.2	-1.4	.4	10.0	67	1.2	35	90	63	0	1	6	0
BURNS	28	18	35	1	23	-3	.5	0	.2	2.6	115	.5	81	***	***	0	7	3	0
MEDFORD	49	36	56	30	43	6	.5	-.3	.3	4.3	94	.5	46	97	72	0	1	4	0
PENDLETON	25	18	35	9	22	-11	.4	0	.1	1.7	76	.4	79	97	82	0	7	5	0
PORTLAND	38	32	41	31	35	-4	.8	-.7	.4	8.8	106	.8	42	80	59	0	5	3	0
SALEM	41	32	54	27	37	-2	1.2	-.5	.5	12.1	131	1.2	53	95	69	0	5	5	0
PA ALLENTOWN	25	11	36	6	18	-10	.7	-.1	.5	2.2	46	.7	65	78	47	0	7	3	1
ERIE	23	11	33	3	17	-9	.6	0	.4	4.0	99	.6	77	82	58	0	7	4	0
HARRISBURG	26	12	38	6	19	-11	.3	-.4	.1	2.1	51	.3	28	76	44	0	7	3	0
PHILADELPHIA	28	13	40	7	21	-11	.7	0	.4	2.4	55	.7	76	78	47	0	7	4	0
PITTSBURGH	21	6	32	-3	14	-14	.2	-.5	.1	2.6	77	.2	24	89	51	0	7	3	0
SCRANTON	22	7	33	2	15	-11	.2	-.3	.2	1.2	37	.2	28	88	41	0	7	2	0
RI PROVIDENCE	28	14	35	6	21	-8	.9	-.1	.5	3.1	55	.9	77	80	41	0	7	3	1
SC CHARLESTON	40	30	46	26	35	-13	1.1	.3	.7	2.8	69	1.2	126	95	62	0	5	2	1
COLUMBIA	39	27	49	20	33	-12	2.1	1.1	1.3	4.3	91	2.8	226	92	51	0	5	3	2
FLORENCE	38	26	46	20	32	-13	1.9	1.1	1.0	4.4	111	2.0	199	91	51	0	5	2	2
GREENVILLE	37	24	51	17	30	-11	1.6	.7	1.3	6.8	128	2.2	174	86	55	0	5	3	1
SD ABERDEEN	5	-17	16	-28	-6	-14	T	-.1	T	.1	14	T	0	82	56	0	7	0	0
HURON	1	-22	20	-37	-10	-22	0	-.1	0	1.3	210	0	0	80	64	0	7	0	0
RAPID CITY	14	-10	24	-20	2	-19	T	-.1	T	.3	61	T	18	79	47	0	7	1	0
SIOUX FALLS	3	-18	15	-29	-8	-20	T	-.1	T	1.4	165	T	0	82	64	0	7	0	0
TN CHATTANOOGA	33	23	44	17	28	-11	1.6	.4	1.2	5.1	76	1.8	117	84	56	0	6	2	1
KNOXVILLE	32	22	44	13	27	-11	.8	-.3	.5	4.6	77	1.1	80	86	53	0	7	3	0
MEMPHIS	29	19	41	6	24	-15	.7	-.4	.3	12.1	194	.7	48	88	55	0	7	3	0
NASHVILLE	29	16	41	6	22	-15	.7	-.3	.7	6.2	104	.8	56	88	52	0	7	1	1
TX ABILENE	36	25	54	19	31	-12	.1	-.2	.1	4.6	400	.1	18	92	66	0	6	1	0
AMARILLO	26	10	41	-6	18	-17	.4	.2	.2	2.1	333	.4	250	95	68	0	7	3	0
AUSTIN	45	31	54	25	38	-11	.2	-.2	.2	1.6	63	.3	59	94	55	0	3	1	0
BEAUMONT	46	34	51	30	40	-12	1.4	.5	1.0	8.1	132	1.9	154	89	54	0	3	2	1
BROWNSVILLE	57	45	73	36	51	-10	T	-.2	T	1.3	93	.9	288	97	77	0	0	1	0
CORPUS CHRISTI	53	40	71	32	47	-9	.1	-.2	.1	1.3	77	.3	77	92	64	0	1	3	0
DEL RIO	47	35	57	30	41	-9	T	-.1	T	.6	90	T	21	82	57	0	4	1	0
EL PASO	58	31	62	22	44	1	T	-.1	T	2.9	615	T	18	86	31	0	5	1	0
FORT WORTH	37	25	49	16	31	-13	.2	-.2	.2	3.1	138	.2	34	90	56	0	6	1	0
GALVESTON	46	37	62	31	42	-12	1.3	.5	.7	3.8	85	2.0	217	89	62	0	1	2	2
HOUSTON	44	32	50	29	38	-14	.9	.1	.9	5.4	113	.9	84	93	56	0	3	1	1
LUBBOCK	30	19	43	11	25	-14	.1	.1	.1	1.2	260	.1	118	100	79	0	7	2	0
MIDLAND	40	24	56	20	32	-11	T	-.1	T	.4	72	T	9	97	69	0	7	1	0
SAN ANGELO	44	26	63	20	35	-10	T	-.1	T	2.1	258	T	6	95	63	0	6	1	0
SAN ANTONIO	47	33	58	25	40	-10	.3	-.1	.3	2.4	139	.3	63	86	57	0	4	1	0
VICTORIA	48	35	56	29	41	-11	.2	-.3	.2	2.0	76	.2	32	93	61	0	3	1	0
WACO	41	28	51	22	34	-12	.3	0	.3	3.8	159	.5	98	94	65	0	6	2	0
WICHITA FALLS	31	18	52	2	24	-16	1.1	.9	1.1	5.9	402	1.1	386	92	56	0	7	1	1
UT BLANDING	33	17	39	7	25	-2	.4	.1	.2	1.2	70	.4	102	95	80	0	7	3	0
CEDAR CITY	38	18	45	5	28	-1	.2	0	.1	1.2	146	.2	83	99	68	0	7	2	0
SALT LAKE CITY	31	18	36	1	24	-4	.6	.3	.3	1.7	100	.6	162	94	71	0	7	4	0
VT BURLINGTON	21	7	30	-4	14	-4	.1	-.3	.1	1.3	42	.1	17	79	40	0	7	3	0
VA NORFOLK	37	27	45	18	32	-9	2.1	1.3	1.2	4.8	113	2.4	229	83	42	0	5	3	2
RICHMOND	32	18	44	12	25	-12	1.0	.2	.4	3.9	90	1.0	107	85	45	0	7	4	0
ROANOKE	29	15	43	8	22	-13	.7	.1	.6	2.9	77	.7	84	78	37	0	7	4	1
WA QUILLAYUTE	45	31	48	23	38	0	.9	-2.6	.4	12.6	57	.9	19	99	73	0	3	5	0
SEATTLE-TACOMA	45	35	48	28	40	1	.6	-.8	.3	6.8	83	.6	33	75	40	0	1	2	0
SPOKANE	23	14	27	-5	19	-7	.2	-.4	.1	5.1	157	.2	22	90	76	0	7	2	0
YAKIMA	28	20	31	16	24	-4	.3	0	.2	3.6	212	.3	72	94	71	0	7	3	0
WV BECKLEY	21	9	32	-2	15	-16	.2	-.5	.1	4.8	116	.5	51	94	56	0	7	3	0
CHARLESTON	25	12	37	1	19	-15	.2	-.6	.1	4.5	104	.3	31	88	52	0	7	5	0
HUNTINGTON	25	11	36	-3	18	-16	.4	-.4	.2	5.2	128	.4	43	89	51	0	7	4	0
PARKERSBURG	24	8	35	-5	16	-16	.2	-.5	.1	3.4	95	.2	24	95	58	0	7	2	0
WI GREEN BAY	6	-10	25	-19	-2	-17	T	-.3	T	2.0	115	T	0	80	58	0	7	0	0
LACROSSE	6	-8	23	-15	-1	-16	T	-.2	T	1.8	133	T	0	76	51	0	7	0	0
MADISON	6	-12	26	-21	-3	-19	T	-.3	T	4.1	219	T	0	80	52	0	7	0	0
MILWAUKEE	11	-5	28	-12	3	-17	T	-.4	T	5.4	213	T	0	81	58	0	7	0	0
WAUSAU	4	-14	20	-23	-5	-16	T	-.2	T	1.5	95	T	0	73	44	0	7	0	0
WY CASPER	21	-1	33	-6	10	-13	T	-.1	T	.6	100	T	0	86	58	0	7	0	0
CHEYENNE	20	-1	29	-7	9	-17	.2	.1	.1	1.0	215	.2	145	86	57	0	7	3	0
LANDER	18	-2	30	-10	8	-11	T	-.1	T	.7	111	T	0	86	58	0	7	0	0
SHERIDAN	19	-5	28	-13	7	-13	.1	-.1	.1	.4	43	.1	33	89	57	0	7	1	0
PR SAN JUAN	84	72	85	69	78	1	.8	.1	.4	9.2	171	1.4	148	93	79	0	0	6	0

Based on 1951-80 normals.

Heating Degree Days Summary

CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
ASSESSMENT AND INFORMATION SERVICES CENTER-NESDIS-NOAA

LAST DATE OF DATA COLLECTION PERIOD IS 1- 9-1988
ACCUMULATIONS ARE FROM JULY 1
** = NORMAL LESS THAN 100 OR RATIO INCALCULABLE

STATE CITY	CALL	WEEK TOTAL	WEEK DEV FROM NORM	WEEK DEV FROM L YR	CUM TOTAL	CUM DEV FROM NORM	CUM DEV FROM L YR	CUM DEV FROM NORM PRCT	CUM DEV FROM L YR PRCT
AL BIRMINGHAM	BHM	231	77	79	1329	-1	131	0	11
AL MOBILE	MOB	168	63	64	784	1	55	0	8
AL MONTGOMERY	MGM	185	58	52	1025	-30	85	-3	9
AK ANCHORAGE	ANC	326	-45	57	4745	-551	303	-10	7
AK BARROW	BRW	433	-117	-176	8884	-472	190	-5	2
AK FAIRBANKS	FAI	486	-67	64	6306	-820	-66	-12	-1
AK JUNEAU	JNU	313	9	116	3578	-766	-143	-18	-4
AK KODIAK	ADQ	201	-32	-17	4071	-98	336	-2	9
AK NOME	OME	250	-166	-288	6258	-368	221	-6	4
AZ FLAGSTAFF	FLG	231	-28	-27	3177	1	-106	0	-3
AZ PHOENIX	PHX	77	-16	14	573	-86	188	-13	49
AZ PRESCOTT	PRC	178	-25	-18	1919	-206	-162	-10	-8
AZ TUCSON	TUS	87	-13	-7	749	-15	88	-2	13
AZ WINSLOW	INW	218	-20	26	2198	-54	-15	-2	-1
AZ YUMA	YUM	66	-4	-2	456	-10	161	-2	55
AR FORT SMITH	FSM	293	99	120	1604	6	31	0	2
AR LITTLE ROCK	LRI	290	115	123	1507	51	24	4	2
CA BAKERSFIELD	BFL	112	-14	-27	1053	52	24	5	2
CA EUREKA	EKA	93	-33	-29	1688	-502	-180	-23	-10
CA FRESNO	FAT	131	-15	7	1190	-53	220	-4	23
CA LOS ANGELES	LAX	70	4	-8	548	-42	187	-7	52
CA SACRAMENTO	SAC	121	-26	-21	1055	-181	-79	-15	-7
CA SAN DIEGO	SAN	61	-2	-2	500	21	131	4	36
CA SAN FRANCISCO	SFO	116	-3	3	1017	-361	-174	-26	-15
CA STOCKTON	SCK	122	-25	-14	1112	-109	-27	-9	-2
CO DENVER	DEN	386	136	169	2893	231	184	9	7
CO GRAND JUNCTION	GJT	321	36	85	2607	-49	41	-2	2
CO PUEBLO	PUB	410	160	200	2785	288	182	12	7
CT BRIDGEPORT	BDR	312	67	86	2317	130	61	6	3
CT HARTFORD	BDL	329	52	66	2714	43	-25	2	-1
DE WILMINGTON	ILG	300	66	88	2103	62	47	-1	2
DC WASHINGTON	DCA	296	90	104	1860	87	66	5	4
FL APALACHICOLA	AQQ	131	46	55	566	-41	185	-7	49
FL DAYTONA BEACH	DAB	73	17	9	298	-66	120	-18	67
FL FORT MEYER	FMY	11	-21	-7	85	-87	39	-51	85
FL JACKSONVILLE	JAX	157	66	61	655	18	193	3	42
FL KEY WEST	EYW	0	-7	0	5	-27	5	**	**
FL MIAMI	MIA	1	-13	-11	32	-32	12	**	**
FL ORLANDO	MCO	41	-5	1	182	-82	81	-31	80
FL TALLAHASSEE	TLH	163	65	52	783	27	187	4	31
FL TAMPA	TPA	39	-10	4	202	-99	94	-33	87
FL WEST PALM BEACH	PBI	2	-15	-12	54	-33	26	**	**
GA ATLANTA	ATL	233	72	91	1229	-146	54	-11	5
GA AUGUSTA	AGS	210	70	57	1177	-9	201	-1	21
GA MACON	MCN	205	78	62	1095	42	146	4	15
GA SAVANNAH	SAV	193	76	74	860	-31	189	-3	28
HI HILO-HAWAII	ITO	0	0	0	0	0	0	**	**
HI HONOLULU-OAHU	HNL	0	0	0	0	0	0	**	**
HI KAHULUI-MAUI	OGG	0	0	0	0	0	0	**	**
HI LIHUE-KAUAI	LIH	0	0	0	0	0	0	**	**
ID BOISE	BOI	278	26	32	2521	-148	-316	-6	-11
ID LEWISTON	LWS	279	45	69	2318	-221	-136	-9	-6
ID POCATELLO	PIH	316	23	8	3130	-94	-245	-3	-7
IL CHICAGO	ORD	426	123	196	2811	59	162	2	6
IL MOLINE	MLI	420	102	169	2841	9	96	0	3
IL PEORIA	PIA	391	87	156	2702	-26	122	-1	5
IL QUINCY	UIN	363	75	141	2461	-69	9	-3	0
IL ROCKFORD	RFD	462	136	202	3142	109	198	4	6
IL SPRINGFIELD	SPI	369	89	151	2446	-17	21	-1	1
IN EVANSVILLE	EVV	340	102	140	2088	-22	18	-1	1
IN FORT WAYNE	FWA	382	94	161	2748	27	111	1	4
IN INDIANAPOLIS	IND	366	96	155	2486	13	68	1	3
IN SOUTH BEND	SBN	409	119	187	2827	110	126	4	5
IA DES MOINES	DSM	419	96	186	2841	-19	27	-1	1
IA DUBUQUE	DBQ	476	132	218	3283	53	111	2	3
IA SIOUX CITY	SUX	435	94	185	3035	-53	41	-2	1
IA WATERLOO	ALO	472	118	216	3247	-80	-12	-2	0
KS CONCORDIA	CNK	389	110	1/1	2441	-35	74	-1	3
KS DODGE CITY	DDC	390	140	175	2348	89	111	4	5
KS GOODLAND	GLD	399	133	183	2803	70	299	3	12
KS TOPEKA	TOP	358	78	137	2258	-131	-42	-5	-2
KS WICHITA	ICT	369	121	149	2198	53	21	2	1
KY BOWLING GREEN	BWG	320	104	134	2004	62	130	3	7
KY LEXINGTON	LEX	337	106	133	2090	-30	39	-1	2
KY LOUISVILLE	SDF	330	106	140	1994	-5	58	0	3
LA ALEXANDRIA	AEX	198	81	85	901	1	1	0	0
LA BATON ROUGE	BTR	174	72	92	693	-82	0	-11	1
LA LAKE CHARLES	LCH	183	89	92	792	-18	6	-3	1
LA NEW ORLEANS	MSY	150	57	65	609	-63	2	-9	0
LA SHREVEPORT	SHV	230	97	94	1091	46	-58	4	-5
ME CARIBOU	CAR	418	40	96	4173	-85	-323	-2	-7
ME PORTLAND	PWM	342	41	73	3100	-92	-69	-3	-2
MD BALTIMORE	BWI	305	81	101	2091	68	97	3	5
MD SALISBURY	SBY	285	76	87	1901	29	113	2	6
MA BOSTON	BOS	308	55	63	2304	9	-73	0	-3
MA CHATHAM	CHH	273	42	54	2317	-16	59	-1	3
MI ALPENA	APN	386	60	142	3351	-204	-6	-6	0
MI DETROIT	DTW	375	88	148	2772	-41	124	-1	5
MI FLINT	FNT	381	79	143	2984	-6	82	0	3
MI GRAND RAPIDS	GRR	403	107	176	3038	90	115	3	4
MI HOUGHTON LAKE	HTL	403	74	153	3135	-228	-21	-6	-1
MI LANSING	LAN	404	106	170	3050	72	91	2	3
MI MARQUETTE	MQT	457	90	187	4104	-55	-67	-1	-2
MI MUSKEGON	MKG	377	90	154	2912	15	37	1	1
MI SAULT ST MARIE	SSM	402	47	146	3758	-208	1	-5	0
MN ALEXANDRIA	AXN	496	82	219	3736	-305	-8	-8	0
MN DULUTH	DLH	519	110	236	4149	-230	-116	-5	-3
MN INT'L FALLS	INL	542	89	245	4352	-429	-199	-9	-4
MN MINNEAPOLIS	MSP	476	102	230	3396	-130	24	-4	1
MN ROCHESTER	RST	504	128	234	3696	55	66	2	2
MN SAINT CLOUD	STC	503	100	233	3772	-211	-39	-5	-1
MS GREENWOOD	GWO	245	95	92	1223	-46	36	-4	3
MS JACKSON	JAN	226	93	95	1110	12	97	1	10
MS MERIDIAN	MEI	216	80	76	1147	-12	93	-1	9
MO CAPE GIRARDEAU	CGI	317	86	115	1877	-112	-58	-6	-3
MO COLUMBIA	COU	356	94	148	2340	43	82	2	4
MO KANSAS CITY	MCI	362	89	151	2357	26	46	1	2
MO SAINT LOUIS	STL	351	100	149	2112	-75	-17	-3	-1
MO SPRINGFIELD	SGF	352	118	154	2238	163	119	8	6
MT BILLINGS	BIL	415	104	156	3000	-283	-85	-6	-3
MT GLASGOW	GGW	475	81	183	3487	-503	-200	-13	-5
MT GREAT FALLS	GTF	418	93	181	3242	-215	49	-6	2
MT HAVRE	HVR	464	86	194	3677	-252	35	-6	1
MT HELENA	HLN	424	93	126	3552	-204	-415	-5	-10
MT KALISPELL	FCA	412	91	131	3831	-105	-68	-3	-2
MT MILES CITY	MLS	473	118	216	3233	-332	-106	-9	-3
MT MISSOULA	MSO	381	72	86	3633	-45	-167	-1	-4
NE GRAND ISLAND	GRI	449	120	200	2997	77	290	3	11
NE LINCOLN	LNK	392	75	159	2689	-149	54	-5	2
NE NORFOLK	OFK	449	116	192	3109	-36	191	-1	7
E NORTH PLATTE	LBF	442	135	204	3240	103	415	3	15
NE OMAHA	OMA	404	91	167	2773	21	25	1	1
NE SCOTTSBLUFF	BFF	446	158	196	3297	257	315	8	11
NE VALENTINE	VTN	486	162	236	3416	138	287	4	9
NV ELY	ELY	276	-11	-51	3308	-125	-151	-4	-4
NV LAS VEGAS	LAS	145	-5	-3	1240	31	141	3	13
NV RENO	RNO	211	-27	-23	2327	-452	-217	-16	-9
NV WINNEMUCCA	WMC	253	-1	-2	2734	-224	-302	-8	-10
NH CONCORD	CON	363	48	78	3331	70	27	2	1
NJ ATLANTIC CITY	ACY	304	73	90	2205	90	110	4	5
NM ALBUQUERQUE	ABQ	203	-14	0	1915	-159	-256	-8	-12
NM CLOVIS	CVS	259	63	92	1807	-66	-107	-4	-6
NM ROSWELL	ROW	232	64	75	1633	90	-75	6	-4
NY ALBANY	ALB	351	46	60	3026	50	-14	2	0
NY BINGHAMTON	BGM	369	65	97	3203	76	198	2	7
NY BUFFALO	BUF	335	49	80	2696	-129	-69	-5	-2
NY NEW YORK	LGA	292	61	84	1989	-17	87	-1	5
NY ROCHESTER	ROC	347	63	83	2905	110	-27	4	-1
NY SYRACUSE	SYR	354	64	78	2876	40	-55	1	-2
NC ASHEVILLE	AVL	274	78	77	2071	122	289	6	16
NC CAPE HATTERAS	HAT	176	40	32	1047	11	286	1	38
NC CHARLOTTE	CLT	254	81	85	1505	-15	125	-1	9
NC GREENSBORO	GSO	281	90	93	1829	87	185	5	11
NC NEW BERN	EWN	215	61	51	1102	-156	72	-12	7
NC RALEIGH DURHAM	RDU	268	93	86	1625	41	160	3	11
NC WILMINGTON	ILM	216	83	66	1060	-21	140	-2	15
ND BISMARCK	BIS	500	94	238	3777	-286	-100	-7	-3
ND FARGO	FAR	501	79	226	3868	-270	-56	-7	-1
ND GRAND FORKS	GFK	510	74	204	4078	-318	-104	-7	-2
ND WILLISTON	ISN	492	85	203	3825	-346	-195	-8	-5
OH AKRON-CANTON	CAK	378	94	119	2718	50	109	2	4
OH CLEVELAND	CLE	361	90	121	2622	27	137	1	6
OH COLUMBUS	CMH	351	88	135	2432	-49	107	-2	5
OH CINCINNATI	CVG	357	107	152	2355	51	115	2	5
OH DAYTON	DAY	363	98	146	2493	26	90	1	4
OH TOLEDO	TOL	375	83	148	2814	-23	143	-1	5
OH YOUNGSTOWN	YNG	375	93	122	2818	19	118	1	4
OK OKLAHOMA CITY	OKC	315	112	123	1746	63	19	4	1
OK TULSA	TUL	315	105	125	1723	36	-77	2	-4
OR ASTORIA	AST	176	8	25	2226	-96	53	-4	2
OR BURNS	4BW	326	53	-3	3269	62	-173	2	-5
OR MEDFORD	MFR	156	-41	-48	1714	-481	-435	-22	-20
OR PENDLETON	PDT	302	73	96	2483	32	-51	1	-2
OR PORTLAND	PDX	222	36	1019	-279	-69	-13	-4	
OR SALEM	SLE	196	14	9	2028	-190	-133	-9	-6
PA ALLENTOWN	ABE	329	67	88	2559	51	19	2	1
PA ERIE	ERI	337	59	102	2536	-229	7	-8	0
PA HARRISBURG	CXY	322	77	85	2445	137	48	6	2
PA PHILADELPHIA	PHL	309	75	97	2079	-18	45	-1	2
PA PITTSBURGH	PIT	359	95	116	2550	-38	51	-1	2
PA SCRANTON	AVP	351	75	87	2849	112	48	4	2
RI PROVIDENCE	PVD	308	53	71	2469	14	6	1	0
SC CHARLESTON	CHS	212	91	79	929	-35	185	-4	25
SC COLUMBIA	CAE	225	84	66	1326	116	220	10	20
SC FLORENCE	FLO	229	89	71	1159	6	116	1	11
SC GREENVILLE	GSP	240	72	66	1559	81	106	5	7
SD ABERDEEN	ABR	493	98	222	3624	-192	14	-5	0
SD HURON	HON	523	148	255	3537	-67	176	-2	5
SD RAPID CITY	RAP	437	129	207	3103	-119	-67	-4	-2
SD SIOUX FALLS	FSD	503	136	249	3495	-15	106	0	3
TN CHATTANOOGA	CHA	257	75	86	1613	-34	195	-2	14
TN KNOXVILLE	TYS	266	77	82	1821	138	205	8	13
TN MEMPHIS	MEM	284	100	116	1426	-134	-18	-2	-1
TN NASHVILLE	BNA	296	101	118	1704	4	67	0	4
TX ABILENE	ABI	238	84	102	1312	82	-31	7	-2
TX AMARILLO	AMA	327	118	141	2181	255	101	13	5
TX AUSTIN	AUS	189	77	106	821	13	43	2	6
TX BROWNSVILLE	BRO	99	51	70	304	39	-44	15	-13
TX CORPUS CHRISTI	CRP	127	59	83	478	45	-30	10	-6
TX DEL RIO	DRT	164	60	83	821	71	75	9	10
TX EL PASO	ELP	144	-8	0	1357	18	-82	1	-6
TX FORT WORTH	DFW	235	95	102	1185	141	-7	14	-1
TX GALVESTON	GLS	160	83	98	517	1	-33	0	-6
TX HOUSTON	IAH	188	93	109	723	16	-6	2	-1
TX LUBBOCK	LBB	282	100	116	1691	63	2	4	0
TX MIDLAND ODESSA	MAF	220	78	91	1402	133	-10	10	-1
TX BEAUMONT	BPT	172	75	95	668	-7	-2	-1	0
TX SAN ANGELO	SJT	209	70	87	1256	151	33	14	3
TX SAN ANTONIO	SAT	172	67	86	751	0	3	0	0
TX VICTORIA	VCT	164	78	97	593	24	-26	4	-4
TX WACO	ACT	213	80	89	1061	99	1	10	0
TX WICHITA FALLS	SPS	283	100	127	1491	97	46	7	3
UT BLANDING	4BL	277	8	35	2646	-117	-131	-4	-5
UT CEDAR CITY	CDC	256	4	2	2670	1	-143	0	-5
UT SALT LAKE CITY	SLC	283	24	47	2461	-181	-262	-7	-10
VT BURLINGTON	BTV	357	24	54	3259	-139	-68	-4	-2
VA LYNCHBURG	LYH	325	116	122	2266	341	343	18	18
VA NORFOLK	ORF	232	58	61	1423	-14	164	-1	13
VA RICHMOND	RIC	278	82	84	1792	34	100	2	6
VA ROANOKE	ROA	290	94	85	1966	28	74	1	4
WA COLVILLE	6SB	330	43	95	3204	-189	118	-6	4
WA QUILLAYUTE	UIL	187	5	14	2489	-228	-37	-8	-1
WA SEATTLE-TACOMA	SEA	173	-9	-18	1978	-336	-159	-15	-7
WA SPOKANE	GEG	323	44	74	3122	-82	-151	-3	-5
WA WALLA WALLA	ALW	296	79	103	2333	86	-9	4	0
WA YAKIMA	YKM	285	22	63	2789	-82	-136	-3	-5
WV BECKLEY	BKW	349	105	128	2437	-61	129	-2	6
WV CHARLESTON	CRW	323	99	120	2131	38	114	1	6
WV HUNTINGTON	HTS	331	107	136	2122	28	121	1	6
WV PARKERSBURG	PKB	344	110	133	2276	100	89	5	4
WI GREEN BAY	GRB	464	111	205	3434	-76	32	-2	1
WI LACROSSE	LSE	457	183	218	3171	-133	3	-4	0
WI MADISON	MSN	470	128	219	3322	-29	95	-1	3
WI MILWAUKEE	MKE	431	111	187	2979	-102	100	-3	3
WI WAUSAU	AUW	483	109	226	3600	-150	4	-4	0
WY CASPER	CPR	386	85	91	3478	75	63	2	2
WY CHEYENNE	CYS	390	117	145	3401	199	132	6	4
WY LANDER	LND	398	77	61	3637	39	-106	1	-3
WY SHERIDAN	SHR	486	86	118	3398	-141	-36	-4	-1

NORMAL TOTAL PRECIPITATION (Inches), FEBRUARY
SCALE OF SHADES
LESS THAN 1 INCH
1 TO 2 INCHES
2 TO 4 INCHES
4 TO 8 INCHES
OVER 8 INCHES
CAUTION SHOULD BE USED IN INTERPOLATING ON THESE GENERALIZED MAPS, PARTICULARLY IN MOUNTAINOUS AREAS.
BASED ON THE PERIOD, 1931-60
GULF OF MEXICO
PACIFIC OCEAN
ATLANTIC OCEAN
ALASKA
INSUFFICIENT DATA FOR ISOLINES
AREAS TOO SMALL TO SHADE
HAWAII
PUERTO RICO AND VIRGIN ISLANDS

December Weather and Crop Summary

Weather

HIGHLIGHTS: Temperatures averaged generally above normal from the Rockies eastward, below normal in the Far West. The Gulf States, the Atlantic Coast States, and parts of the northern Great Plains had below normal precipitation. Heavy rains fell in Texas, the lower Mississippi Valley, and Pacific coastal areas. Significant snowfall occurred in the central Great Plains and the Midwest.

DECEMBER 1-5...Dry weather prevailed in the Great Basin, from the Continental Divide to the Mississippi Valley, and through most of the Southeast. Pacific coastal areas had abundant rains. Beneficial precipitation returned to eastern Washington and northern Idaho. A storm system spread snow from the upper Ohio Valley to New England.

DECEMBER 6-12...Temperatures were generally above normal. A series of storms brought inundative rains to much of the Pacific Northwest, with snow at higher elevations. High winds swept the Great Plains. Severe thunderstorms were mainly confined to east Texas, the Mississippi Delta, southern Florida, and the Middle Atlantic States. Cold air moved into southern California and Arizona at week's end.

DECEMBER 13-19...A major storm developed on Sunday over the Southwest, producing a major snowfall in Arizona and New Mexico. This storm strengthened Monday and Tuesday as it moved across Oklahoma and northern Texas, spawning killer tornadoes in Arkansas, Missouri, and Tennessee.

DECEMBER 20-26...Winter storms brought cold, snowy weather to the West. A slow-moving frontal system produced torrential rains with widespread flooding in the lower Mississippi Valley and the Tennessee Valley. The eastern Gulf States had unseasonably mild weather.

DECEMBER 27-31...A series of polar outbreaks brought snow to the West, the country's midsection, and the Northeast. Unseasonably cold weather prevailed in most of the Nation west of the Mississippi River. The Southeast experienced mostly wet, mild weather.

Crop Highlights

ALL COTTON production in 1987 is expected to total 14.7 million bales, 51 percent above the 1986 crop and 3 percent above the December 1 forecast.

CITRUS production is forecast at 12.1 million tons, 3 percent higher than last season and 12 percent above the 1985-86 season.

ORANGE production is forecast at 191 million boxes, up 3 percent from December 1 and 5 percent above last season.

GRAPEFRUIT production, excluding California "other areas" crop, is forecast at 61.6 million boxes, up 2 percent from December 1 and 6 percent above last season.

LEMON production, at 23.5 million boxes, is down 1 percent from the previous forecast and 18 percent below last season.

WINTER POTATO production for 1988 is forecast at 2.75 million cwt, up 10 percent from last year but down 8 percent from 1986.

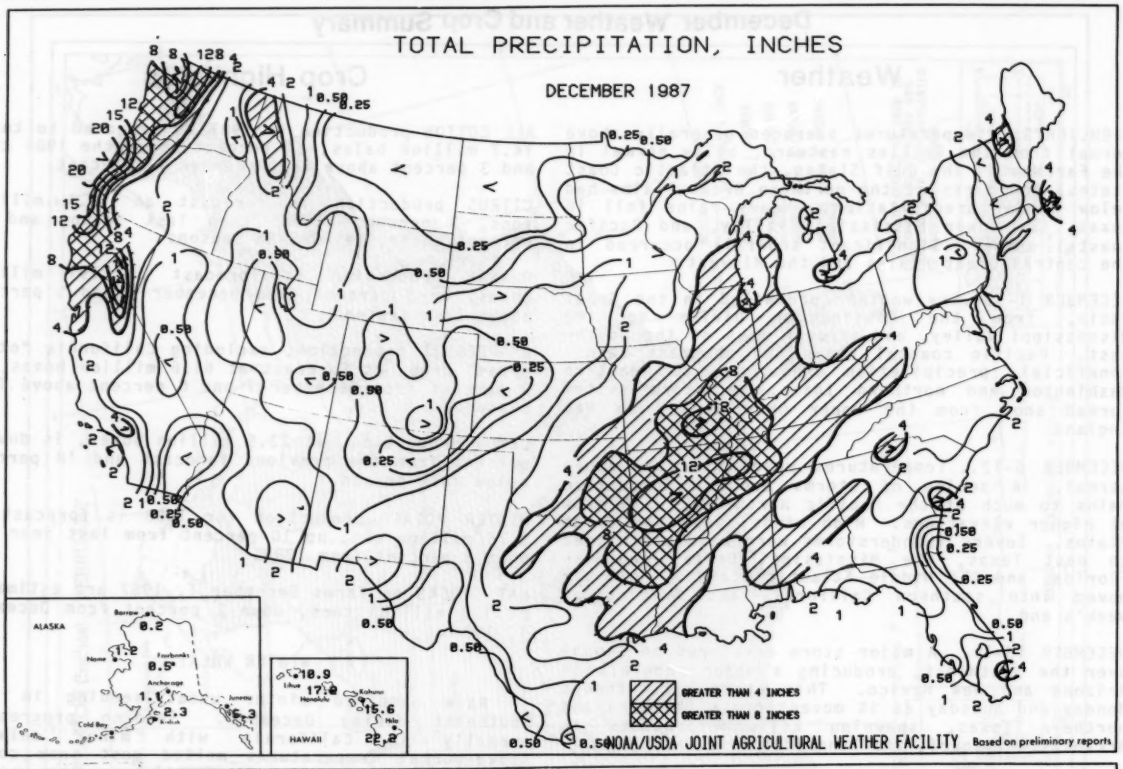
HAY STOCKS on farms December 1, 1987 are estimated at 120 million tons, down 2 percent from December 1, 1986.

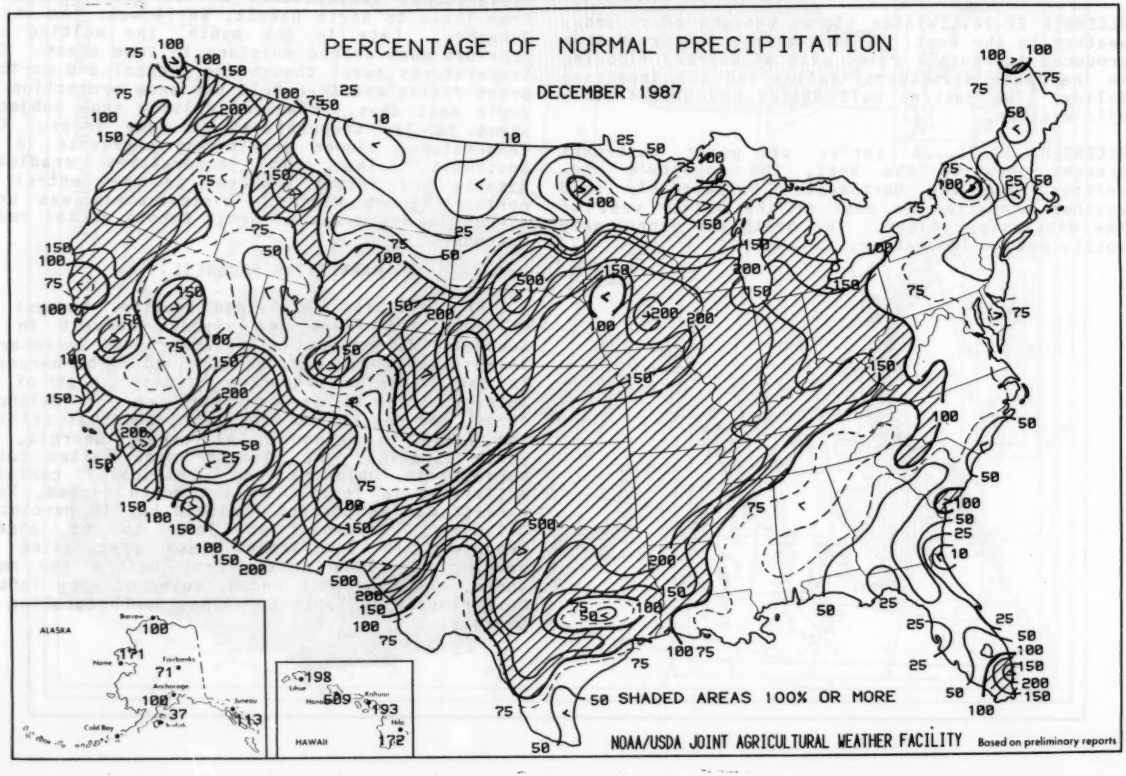
WINTER WHEAT

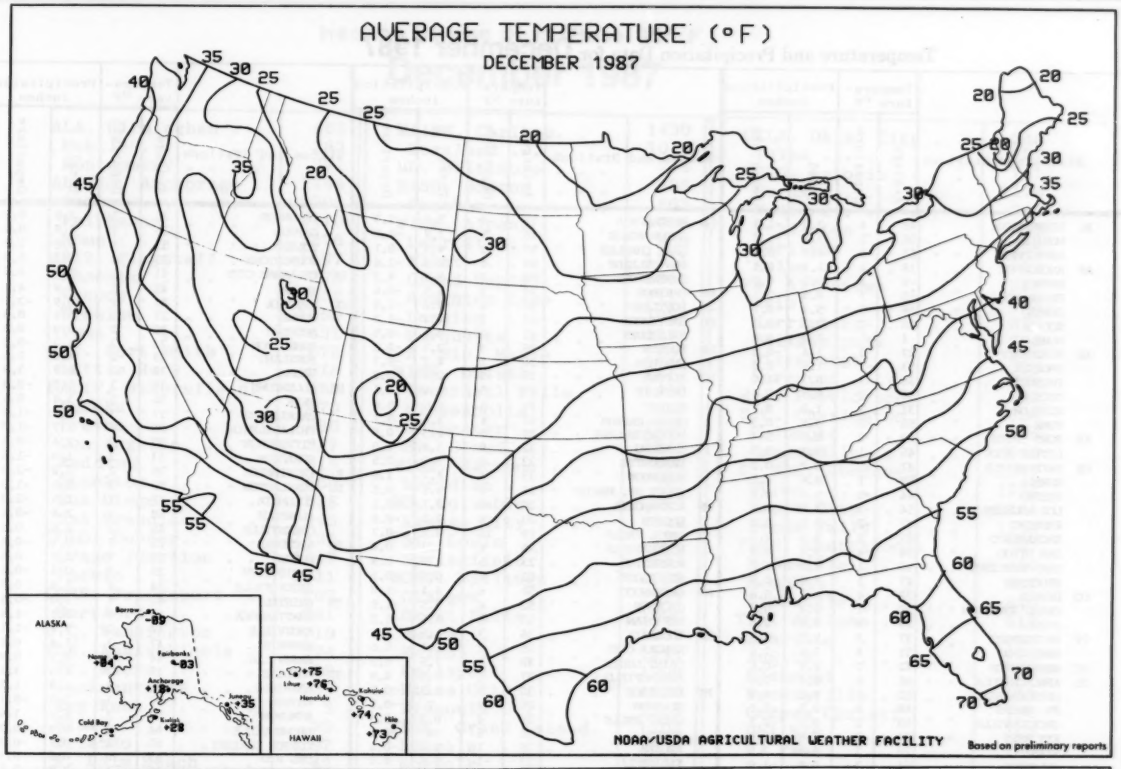
Rain hampered winter wheat seeding in the Southeast during December. Seeding progressed normally in California with minor delays. Above-normal temperatures melted most snow cover from Texas to North Dakota, until near the end of December. Late in the month, the melting snow provided much needed moisture in some areas. Cold temperatures swept though the central and northern Great Plains and Corn Belt but snow protection was ample most days. However, melting snow subjected wheat to low temperatures in some areas. Cool temperatures slowed growth and emergence in the Southwest. The cold temperatures eradicated disease and insect problems in the central and northern Great Plains. Winter wheat was under stress in dry areas of South Dakota at the end of December.

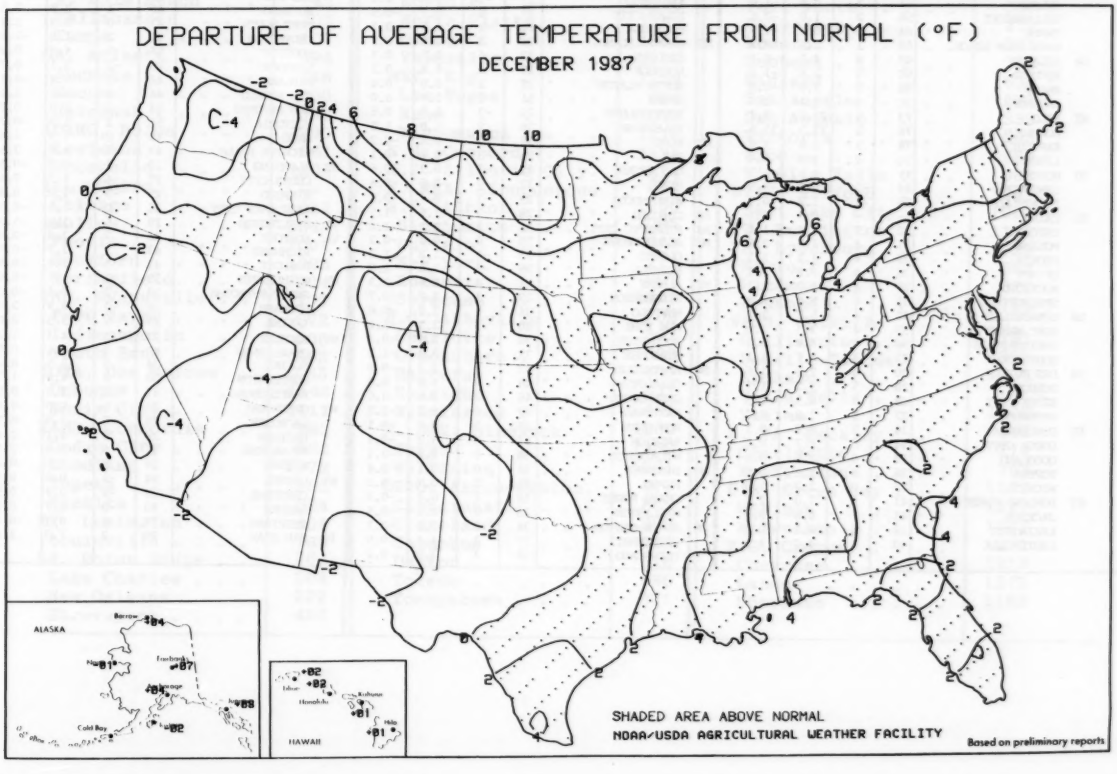
HARVESTING PROGRESS

Precipitation prolonged cotton harvest in Oklahoma and Texas and soybean harvest in the Southeast during most of December. On December 6, 15 percent of the acreage remained to be harvested in the 14 major producing States. Most of the acreage left to be harvested was in Oklahoma, Texas, and New Mexico but some cotton was still in the field in Arizona, California, Georgia, and South Carolina. At midmonth snow halted cotton harvest in Oklahoma and drastically curtailed activities in Texas. As the month closed, Texas harvest was 98 percent finished but 10 percent of Oklahoma's acreage was left to be picked. Producers in California began preparation for seeding the 1988 cotton crop before the month ended. As the month ended, soybeans were left to be harvested in South Carolina, North Carolina and Georgia.


TOTAL PRECIPITATION, INCHES
DECEMBER 1987
ALASKA
HAWAII
GREATER THAN 4 INCHES
GREATER THAN 8 INCHES
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


PERCENTAGE OF NORMAL PRECIPITATION
DECEMBER 1987
ALASKA
HAWAII
50 SHADED AREAS 100% OR MORE
NOAA/USDA JOINT AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


AVERAGE TEMPERATURE (°F)
DECEMBER 1987
ALASKA
HAWAII
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports


DEPARTURE OF AVERAGE TEMPERATURE FROM NORMAL (°F)
DECEMBER 1987
ALASKA
HAWAII
SHADED AREA ABOVE NORMAL
NOAA/USDA AGRICULTURAL WEATHER FACILITY
Based on preliminary reports

Temperature and Precipitation Data for December 1987

States and Stations	Temperature °F Average	Temperature °F Departure	Precipitation Inches Total	Precipitation Inches Departure
AL BIRMINGHAM	49	4	3.0	-1.9
MOBILE	56	3	3.6	-1.8
MONTGOMERY	53	4	4.3	-0.5
AK ANCHORAGE	18	4	1.1	0.1
BARROW	-9	4	0.2	0.0
FAIRBANKS	-3	7	0.5	-0.2
JUNEAU	34	7	5.3	0.7
KODIAK	28	-2	2.3	-3.2
NOME	4	-1	1.2	0.6
AZ FLAGSTAFF	27	-3	1.4	-0.9
PHOENIX	53	-1	1.6	0.8
PRESCOTT	36	-1	0.7	-1.0
TUCSON	50	-1	1.5	0.6
WINSLOW	31	-2	1.3	0.7
YUMA	55	-2	0.6	0.3
AR FORT SMITH	43	2	8.1	5.3
LITTLE ROCK	45	1	13.7	9.7
CA BAKERSFIELD	47	-1	0.8	0.2
EUREKA	50	1	10.9	4.7
FRESNO	44	-1	1.2	-0.4
LOS ANGELES	54	-3	1.8	0.2
REDDING	47	-2	9.1	2.0
SACRAMENTO	47	2	3.2	0.3
SAN DIEGO	54	-4	2.7	0.8
SAN FRANCISCO	50	1	4.5	1.0
STOCKTON	47	1	2.4	0.0
CO DENVER	28	-4	1.3	0.8
GRAND JUNCTION	28	-1	0.8	0.3
PUEBLO	29	-4	0.7	0.4
CT BRIDGEPORT	37	3	2.1	-1.7
HARTFORD	33	4	1.6	-2.6
DC WASHINGTON	42	2	2.6	-0.6
FL APALACHICOLA	58	3	0.9	-2.6
DAYTONA BEACH	62	2	0.3	-1.9
FT. MYERS	68	3	0.5	-1.1
JACKSONVILLE	58	2	0.2	-2.3
KEY WEST	71	0	2.8	1.0
MIAMI	70	1	4.3	2.5
ORLANDO	64	3	0.5	-1.4
TALLAHASSEE	56	2	1.0	-3.6
TAMPA	64	3	0.5	-1.6
WEST PALM BEACH	68	1	1.5	-0.8
GA ATLANTA	49	4	4.1	-0.1
AUGUSTA	50	3	1.4	-1.8
MACON	52	3	1.9	-2.2
SAVANNAH	55	4	1.4	-1.4
HI HILO	73	1	22.2	9.4
HONOLULU	76	2	17.3	13.9
KAHULUI	74	1	5.6	2.8
LIHUE	75	2	109	5.4
ID BOISE	33	1	1.1	-0.3
LEWISTON	34	-1	0.8	-0.5
POCATELLO	26	-1	1.2	0.3
IL CAIRO	--	--	8.3	4.1
CHICAGO	32	5	3.8	1.4
MOLINE	31	4	4.5	2.6
PEORIA	32	4	4.2	2.1
QUINCY	34	4	3.8	2.1
ROCKFORD	29	4	4.0	2.1
SPRINGFIELD	35	4	5.0	2.9
IN EVANSVILLE	40	4	5.7	2.2
FORT WAYNE	33	4	3.5	1.0
INDIANAPOLIS	36	4	4.8	1.8
SOUTH BEND	33	3	4.1	1.2
IA DES MOINES	30	4	2.6	1.6
DUBUQUE	28	5	3.2	1.3
SIOUX CITY	29	5	0.5	-0.3
WATERLOO	27	5	1.8	0.7
KS CONCORDIA	34	2	0.8	0.1
DODGE CITY	34	0	0.7	0.2
GOODLAND	30	0	0.5	0.1
TOPEKA	36	4	1.9	0.6
WICHITA	35	0	2.3	1.3
KY BOWLING GREEN	41	2	7.0	2.4
JACKSON	41	7	6.0	2.5
LEXINGTON	39	3	6.2	2.4
LOUISVILLE	40	3	4.7	1.2
LA ALEXANDRIA	55	4	7.8	2.9
BATON ROUGE	58	5	3.9	-1.1
LAKE CHARLES	57	3	4.9	-0.1
NEW ORLEANS	59	4	2.9	-2.4
SHREVEPORT	50	1	8.1	4.2
ME CARIBOU	19	3	2.5	-0.6
PORTLAND	30	4	2.0	-2.5
MD BALTIMORE	40	3	2.1	-1.3
SALISBURY	41	2	3.2	-0.5
MA BOSTON	36	3	2.1	-2.3
CHATHAM	36	1	4.3	-0.7
MI ALPENA	29	5	2.2	0.2
DETROIT	33	5	4.6	2.1
FLINT	32	5	2.5	0.6
GRAND RAPIDS	32	4	3.3	0.7
HOUGHTON LAKE	29	6	2.5	0.6
LANSING	32	5	3.4	1.0
MARQUETTE	23	0	3.6	1.5
MUSKEGON	33	4	4.2	1.6
SAULT ST. MARIE	26	6	3.1	0.5
MN ALEXANDRIA	20	6	0.7	-0.1
DULUTH	20	6	0.7	-0.6
INT'L FALLS	19	10	0.2	-0.7
MINNEAPOLIS	25	6	1.3	0.4
ROCHESTER	23	5	1.8	0.9
ST. CLOUD	21	6	0.8	-0.1
MS GREENWOOD	50	4	4.4	-1.0
JACKSON	52	4	3.5	-1.9
MERIDIAN	53	5	4.5	-1.2
MO COLUMBIA	36	3	5.5	3.5
KANSAS CITY	35	2	2.1	0.6
SAINT LOUIS	38	4	7.5	5.3
SPRINGFIELD	37	1	7.5	4.9
MT BILLINGS	30	3	0.3	-0.5
GLASGOW	26	9	T	-0.3
GREAT FALLS	30	4	0.2	-0.5
HAVRE	25	6	T	-0.5
HELENA	25	1	0.4	-0.2
KALISPELL	23	-1	1.6	0.0
MILES CITY	27	6	0.1	-0.5
MISSOULA	24	-1	1.1	-0.1
NE GRAND ISLAND	29	2	0.8	0.2
LINCOLN	32	6	0.7	0.1
NORFOLK	29	5	0.8	0.2
NORTH PLATTE	28	2	0.8	0.4
OMAHA	31	3	0.8	0.0
SCOTTSBLUFF	25	-3	1.0	0.5
VALENTINE	26	2	1.8	1.5
NV ELKO	26	0	0.8	-0.2
ELY	25	-1	0.7	-0.1
LAS VEGAS	42	-3	0.9	0.6
RENO	32	0	0.6	-0.6
WINNEMUCCA	29	-1	0.7	-0.2
NH CONCORD	28	3	1.6	-1.9
NJ ATLANTIC CITY	38	2	2.2	-1.4
NM ALBUQUERQUE	35	0	0.3	-0.2
CLOVIS	38	-1	1.8	1.2
ROSWELL	39	-1	1.4	1.0
NY ALBANY	31	4	1.6	-1.3
BINGHAMTON	29	3	2.2	-0.7
BUFFALO	34	5	2.8	-0.6
NEW YORK	40	3	2.3	-1.4
ROCHESTER	33	3	2.0	-0.6
SYRACUSE	32	4	2.0	-1.2
NC ASHEVILLE	42	3	2.3	-0.8
CHARLOTTE	46	3	3.4	0.0
GREENSBORO	42	2	3.4	0.0
HATTERAS	49	0	2.2	-2.2
NEW BERN	49	3	3.6	-0.1
RALEIGH	44	2	3.0	-0.1
WILMINGTON	50	2	1.4	-2.1
ND BISMARCK	24	8	0.1	-0.4
FARGO	21	7	0.7	0.1
GRAND FORKS	18	7	0.4	-0.3
WILLISTON	23	7	0.1	-0.5
OH AKRON-CANTON	34	3	2.3	-0.3
CINCINNATI	37	3	3.4	0.5
CLEVELAND	34	3	3.0	0.2
COLUMBUS	36	3	2.9	0.3
DAYTON	35	3	3.0	0.5
TOLEDO	33	4	3.8	1.2
YOUNGSTOWN	33	4	2.7	0.0
OK OKLAHOMA CITY	41	1	3.8	2.6
TULSA	41	2	5.9	4.1
OR ASTORIA	41	-2	8.9	-2.7
BURNS	27	-1	1.9	0.3
MEDFORD	39	2	3.8	0.3
PENDLETON	33	-3	1.2	-0.4
PORTLAND	39	-2	8.0	1.6
SALEM	39	-2	10.9	3.8
PA ALLENTOWN	35	3	1.5	-2.2
ERIE	36	5	3.4	0.1
HARRISBURG	37	3	1.8	-1.4
PHILADELPHIA	39	4	1.7	-1.8
PITTSBURGH	35	3	2.4	-0.2
SCRANTON	33	2	1.0	-1.5
RI PROVIDENCE	35	2	2.2	-2.3
SC CHARLESTON	53	3	1.6	-1.5
COLUMBIA	49	2	1.5	-2.0
FLORENCE	50	3	2.4	-0.6
GREENVILLE	45	2	4.6	0.6
SD ABERDEEN	25	8	0.1	-0.4
HURON	24	5	1.3	0.8
RAPID CITY	29	3	0.3	-0.1
SIOUX FALLS	24	4	1.4	0.7
TN BRISTAL	42	4	3.0	-0.5
CHATTANOOGA	46	4	3.3	-1.9
KNOXVILLE	44	2	3.5	-1.1
MEMPHIS	47	3	11.4	6.6
NASHVILLE	44	3	5.5	0.9
TX ABILENE	45	-2	4.6	3.7
AMARILLO	35	-4	1.8	1.3
AUSTIN	53	1	1.3	-0.7
BEAUMONT	57	3	6.2	1.6
BROWNSVILLE	64	2	0.4	-0.7
CORPUS CHRISTI	60	1	0.9	-0.3
DEL RIO	53	0	0.6	0.1
EL PASO	40	-4	2.9	2.5
FORT WORTH	47	0	2.9	1.2
GALVESTON	59	2	1.8	-1.8
HOUSTON	56	1	4.6	0.8
LUBBOCK	40	-2	1.1	0.7
MIDLAND	44	-2	0.4	-0.1
SAN ANGELO	46	-2	2.1	1.4
SAN ANTONIO	54	1	2.2	0.8
VICTORIA	58	2	1.9	-0.3
WACO	49	0	3.3	1.4
WICHITA FALLS	43	-1	4.8	3.6
UT BLANDING	29	-1	0.8	-0.5
CEDAR CITY	27	-4	1.1	0.4
MILFORD	25	-3	1.0	0.4
SALT LAKE CITY	31	0	1.1	-0.3
VT BURLINGTON	29	6	1.2	-1.2
VA NORFOLK	46	2	2.3	-0.8
RICHMOND	43	3	2.9	-0.5
ROANOKE	41	3	2.1	-0.8
WA QUILLAYUTE	39	-2	117	-5.8
SEATTLE-TACOMA	39	-2	6.1	-0.2
SPOKANE	26	-3	4.9	2.5
YAKIMA	29	-2	3.3	2.0
WV BECKLEY	37	3	4.3	1.2
CHARLESTON	40	3	4.1	0.9
ELKINS	34	2	3.5	0.2
HUNTINGTON	39	2	4.8	1.7
PARKERSBURG	37	2	3.2	0.5
WI GREEN BAY	27	6	2.0	0.6
LACROSSE	28	6	1.8	0.7
MADISON	28	6	4.1	2.6
MILWAUKEE	31	6	5.4	3.4
WAUSAU	26	8	1.5	0.2
WY CASPER	24	-2	0.6	0.1
CHEYENNE	26	-4	0.9	0.5
LANDER	20	-2	0.7	0.2
SHERIDAN	27	1	0.3	-0.4
PR SAN JUAN	80	2	7.8	3.4

Heating Degree Days (Base 65° F.)

December 1987

ALA. Birmingham	462	MAINE, Caribou	1430	OKLA. Okla. City	748
Mobile	283	Portland	1070	Tulsa	727
Montgomery	391	MD. Baltimore	774	OREG. Astoria	741
ALASKA, Anchorage	1444	MASS. Boston	888	Burns	1176
Barrow	2295	Chatham	863	Medford	786
Fairbanks	2110	MICH. Alpena	1096	Pendleton	995
Nome	1876	Detroit	969	Portland	798
ARIZ. Flagstaff	1167	Flint	1011	Salem	803
Phoenix	375	Grand Rapids	1032	PA. Allentown	926
Tucson	452	Houghton Lake	1117	Erie	902
Winslow	1050	Lansing	1026	Harrisburg	873
Yuma	331	Marquette	1278	Philadelphia	796
ARK. Fort Smith	675	S. Ste. Marie	1202	Pittsburgh	920
Little Rock	618	MINN. Duluth	1377	Scranton	995
CALIF. Bakersfield	552	Internatl Falls	1433	R.I. Providence	921
Eureka	470	Minneapolis	1236	S.C. Charleston	358
Fresno	636	Rochester	1290	Columbia	495
Los Angeles	337	St. Cloud	1348	Greenville	596
Redding	615	MISS. Jackson	408	S. DAK. Aberdeen	1247
Stockton	550	Meridian	387	Huron	1248
San Diego	338	MO. Columbia	897	Rapid City	1111
San Francisco	445	Kansas City	922	Sioux Falls	1252
COLO. Denver	1125	St. Louis	830	TENN. Chattanooga	597
Grand Junction	1147	Springfield	857	Knoxville	660
Pueblo	1111	MONT. Billings	1083	Memphis	557
CONN. Bridgeport	867	Glasgow	1227	Nashville	640
Hartford	981	Great Falls	1090	TEX. Abilene	617
D.C. Washington	719	Havre	1233	Amarillo	936
FLA. Apalachicola	224	Helena	1241	Austin	369
Ft. Myers	29	Kalispell	1298	Beaumont	266
Jacksonville	256	Miles City	1159	Brownsville	119
Key West	5	Missoula	1258	Corpus Christi	190
Miami	29	NEBR. Grand Island	1103	Del Rio	362
Orlando	97	Lincoln	1006	El Paso	750
W. Palm Beach	42	Norfolk	1110	Fort Worth	540
Tallahassee	303	North Platte	1152	Galveston	210
Tampa	107	Omaha	1053	Houston	301
GA. Atlanta	494	Valentine	1198	Lubbock	784
Augusta	448	NEV. Ely	1258	Midland	636
Macon	406	Las Vegas	689	San Angelo	577
Savannah	333	Reno	1017	San Antonio	339
IDAHO, Boise	990	Winnemucca	1116	Victoria	243
Lewiston	961	N.H. Concord	1138	Waco	480
Pocatello	1204	N.J. Atlantic City	814	Wichita Falls	683
ILL. Cairo	--	N. MEX. Albuquerque	914	UTAH, Milford	1241
Chicago	1011	N.Y. Albany	1056	Salt Lake City	1060
Moline	1046	Binghamton	1095	VT. Burlington	1125
Peoria	1001	Buffalo	948	VA. Lynchburg	729
Rockford	1096	New York	774	Norfolk	582
Springfield	934	Rochester	997	Richmond	677
IND. Evansville	777	Syracuse	1007	Roanoke	723
Fort Wayne	972	N.C. Asheville	702	WASH. Colville	--
Indianapolis	900	Charlotte	597	Quillayute	791
South Bend	993	Greensboro	699	Seattle-Tacoma	792
IOWA, Des Moines	1083	Hatteras	495	Spokane	1206
Dubuque	1146	Raleigh	631	Walla Walla	--
Souix City	1111	Wilmington	461	Yakima	1108
KANS. Concordia	963	N. DAK. Bismarck	1260	W. VA. Beckley	842
Dodge City	964	Fargo	1369	Charleston	774
Goodland	1072	Williston	1301	Huntington	793
Topeka	893	OHIO. Akron-Canton	957	WIS. Green Bay	1167
Wichita	924	Cinncinnati	868	Madison	1127
KY. Lexington	804	Cleveland	929	Milwaukee	1037
Louisville	762	Columbus	900	WYO. Casper	1271
LA. Baton Rouge	264	Dayton	916	Cheyenne	1213
Lake Charles	264	Toledo	986	Lander	1372
New Orleans	222	Youngstown	971	Sheridan	1183
Shreveport	456				

National Agricultural Summary

January 4 to 10, 1988

HIGHLIGHTS: Snow halted cotton harvest in Oklahoma and Texas. The cold weather slowed small grain growth in the southern half of the Nation and prevented germination in the Southwest. Snow and low temperatures stressed livestock in the eastern half of the Nation. Supplemental feeding increased nationwide as a result of the cold weather.

SMALL GRAINS: Winter wheat was mostly good to fair. Seeding continued in Georgia and Arizona. Established stands were good in Arizona. Low soil temperatures slowed late plantings germination. Small grains reached the three to five leaf stage in central areas. Wet, cold weather slowed small grain germination and growth in California. Growers applied weed controls in wheat, oats, and barley. In Texas, snow limited small grain growth and prevented serious foliage burn from low temperatures. Most dryland grains could use additional moisture. Most fields provided limited grazing. Winter wheat lacked proper snow cover, except in extreme northern Illinois. Indiana wheat was mostly good. Kansas wheat growers earlier in the week were concerned about winterkill in areas with little or no snow cover. Snow cover protection was mostly poor, but wind damage has been light in Montana. In Nebraska, snow cover was adequate in most areas. Extreme cold, combined with inadequate snow cover, caused concern for winter grains in North Dakota. Virginia small grains were mostly good but showed signs of cold weather stress.

COTTON: Cold weather, combined with sleet and snow, kept cottonpickers idle in Texas. Ginning was slow because of the cold weather. Only 1 percent of the acreage remained to be harvested. Snow kept cotton harvest at 90% completion for the second week in a row in Oklahoma. Stalk shredding and plowdown was active in central, western, and southeastern Arizona. A few fields were standing for harvest in central and southeastern areas. California cotton producers leveled, conditioned, and sprayed soils for the 1988 cotton crop.

OTHER CROPS: Precipitation, especially snow, virtually halted field activity from Texas through the Delta and Southeast.

Burley tobacco markets reopened after Christmas holiday break. Prices declined in Kentucky with increasing amounts going into the Government pool. Tobacco bed preparation continued in the Southeast. Tobacco bed seeding neared completion in Florida.

FRUITS AND NUTS: Florida's citrus were near excellent. Rain was beneficial, but cool temperatures restricted new growth. Midseason fruit naturally colored well. Citrus harvest was active for most fruit. Wet conditions slowed citrus harvest in Texas. In western Arizona, frost damage slowed citrus harvest. Lemons, grapefruits, and oranges were harvested from protected groves. Rain slowed seasonal fruit and nut activities in California. The freeze increased citrus harvest. Caneberry, blueberry, filbert, and tree pruning continued in Oregon. In Washington, fruit tree pruning was active in all districts.

VEGETABLES: The cool weather brought showers to Florida's vegetable producing areas. Land preparation and spring crop planting increased. Harvest was active for many crops. Tomato, celery, cabbage, pepper, squash, lettuce, snap bean, carrot, sweet corn, cucumber, radish, and strawberry volumes were good. Wet conditions slowed vegetable harvest in Texas. Vegetables escaped damage from the cold temperatures but maturity slowed. Late spring lettuce was planted in western Arizona. Leaf and romaine lettuce were shipped from central areas. Cauliflower, broccoli, lettuce, celery, cabbage, and other mixed vegetables were harvested in western Arizona. Cool weather, rain, and short days depressed most vegetable activity in California. Broccoli, cauliflower, celery, carrot, and lettuce harvests were active at Riverside but cool temperatures slowed lettuce maturity. Strawberry harvest was just beginning at Riverside. The cold weather damaged some potatoes stored at Tulelake.

PASTURES AND LIVESTOCK: Livestock weight loss in Texas resulted from limited grazing. The cold weather increased care and feeding of livestock in Indiana. Unfavorable weather, pneumonia, and TGE were the most frequent causes of stress illness, and livestock death in Iowa. Colder temperatures demanded heavier supplemental feeding in the northern and central Great Plains. Oklahoma's livestock was severely stressed from the low temperatures and snow. Cold weather and snow from Texas through the Delta and Southeast and up through Maryland increased feeding and livestock stress. The snow collapsed poultry houses in Arkansas and Alabama, but losses are unknown. Some of the damaged poultry houses were empty in Arkansas. The cold weather virtually halted pasture growth in the southern half of the Nation.

State Summaries of Weather and Agriculture

These summaries provide brief descriptions of crop and weather conditions important on a national scale. More detailed data are available in Weather and Crop Bulletins published each Monday by NASS State Statistical Offices in cooperation with the National Weather Service.

ALABAMA: Snow northern third; sleet, ice central. Snow near 12 in. Tennessee Valley. Rainfall mostly 0.50 to 1.00 in. central, south. Temperatures averaged 13 to 17° below normal.

Many poultry houses collapsed from snow; total loss unknown. Primary activity: Providing supplemental feed; general care of livestock, poultry.

ARIZONA: High cloudiness 3rd, thickened 4th; snow flurries Grand Canyon, Flagstaff. Intermittent rain, snow developed 5th. Skies cleared early 6th, west; caused dense fog. One to 5 in. snow high country. Moisture amounts mostly 0.25 to 0.75 in. central basins, White Mountains northward; under 0.25 in. elsewhere. Variable high cloudiness, sunshine 7th through 9th. Temperatures varied 2° below normal to 3° above.

Small grain plantings continued west, established stands good condition; germination late plantings slow, low soil temperatures. Three to five leaf stage central. Stalk shredding, plowdown cotton active west, central, southeast. Few fields standing for harvest central, southeast. Sheeping off alfalfa continued west, central. Some regrowth as temperatures improved. Horses, cattle grazed dormant fields southeast. Cauliflower, broccoli harvested, shipped west; lettuce, bok choy, cabbage, napa, escarole, endive, greens, parsley, spinach, celery shipped. Late spring lettuce planted west. Leaf, romaine lettuce shipped central. Frost damage west slowed citrus harvest; lemons, grapefruit, oranges harvested from protected groves. Minneolas, navels, grapefruit shipped central. Apples shipped east.

ARKANSAS: Very cold as Arctic air lingered over State. Temperature extremes -13°; 47°. Precipitation all areas in form of snow, sleet, freezing rain. Rainfall total 0.01 to 2.25 in. Average snowfall for central part of State 12 in.

Snow caused no extra damage to wheat. Cattle being fed hay, grains. Shortage of hay, nitrate toxicity from hay some areas. Chicken houses have collapsed under heavy snowfall though not all housing chickens.

CALIFORNIA: Warm, subtropical moisture brought rains all areas but southeast. North , west Sierras received heaviest rains 2 to 5 in. Temperatures generally near normal.

Germination, growth small grains continued some areas slowed wet, cold. Weed control wheat, oats, barley, alfalfa. Cotton growers leveled, conditioned, sprayed. Southern alfalfa frost burn, sheeped off and green chopped. Some seasonal fruit, nut activities slowed by rain. County Commissioner damage assessed from holiday freeze. Avocado damage 10%, citrus less than 10%, Riverside County. Fresno County navel orange loss 10 to 15%. Ventura County damage navels 15%, lemons 10%, valencias, avocados 8%, nursery stock 5%. San Diego losses less than 50% January 1987. Freeze speeded citrus harvest. Pomelo harvest began. Cool weather, rain, short days depressed most vegetable activity. Broccoli, cauliflower, celery, carrot, lettuce harvests all active Riverside though lettuce maturity slowed, cool temperatures. Strawberry harvest just beginning Riverside. Ventura County Commissioner freeze loss estimated 5% for strawberries, celery. Some potatoes stored Tulelake, damaged cold weather. Livestock fair to good statewide. Movement to market active, northern districts. Supplemental feeding full swing various areas. Range, pastures good. Water supply levels showed improvement. Calving, lambing active.

COLORADO: Unsettled weather brought snow to West Slope, mountains early week. Eastern Plains 0.10 to 0.30 in. of moisture. Average temperatures 10 to 20° below normal with considerable warming over weekend.

Feed, care of livestock major activities. Snow cover eastern plains decreased as warming trend continued.

FLORIDA: Except for mild temperatures, partly cloudy skies, sunshine 5th, 6th, remainder of period cloudy, with drizzle, fog few showers mixed with moderate northerly winds, cool temperatures. Cold front reached into Tallahassee area 4th, reinforced by secondary cold front 7th, kept temperatures below normal entire week. Rainfall mostly 0.20 to 0.30 in. with few locations of 1.00 to 3.00 in. north. Strong north, south temperature, cold air north.

Soil moisture improved. Lower half Peninsula mostly adequate; short to adequate elsewhere. Tobacco be planting nearly complete. Winter wheat being topdressed; hesian fly eggs found, some fields. Growers began preparing land for spring crops. Sugarcane harvest good progress. Southern pastures mostly good vary poor to fair elsewhere; recent rains should help. Cattle fair to good. Supplemental feeding underway. Citrus trees near excellent. Rain beneficial, cool temperatures restricted new growth. Midseason fruit naturally well colored. Harvest very active most types. Caretakers keeping soil cultivated. Cool weather midweek brought showers vegetable producing areas. Land preparation, planting spring crops increased. First spring crop ruskin tomatoes planted. Harvest many crops active. Good volume tomatoes, celery, cabbage, peppers, squash, lettuce, snap beans, carrots, sweet corn, cucumbers, radishes, strawberries. Lesser supply eggplant, endive, escarole.

GEORGIA: Unusually warm. Temperatures 7 to 10° above normal north, 10 to 14° central, south. Lows upper 20s north, upper 30s south. Highs upper 60s north, low 80s south. Rain 1 or 2 days, some 5 days northeast mountains. Totals between 1.00 to 4.00 in. northern, central counties, mostly under 0.50 in. elsewhere.

Soil moisture mostly adequate. Main activities: Planting small grains, tobacco bed preparation, pecan harvesting, care of livestock, poultry.

HAWAII: Improved weather. Mostly sunny, variable cloudiness. Moderate to heavy rain early week eastern islands. Rainfall none to 4.10 in. Temperatures low 60s to high 70s. Variable winds 10 to 15 mph.

Days suitable for fieldwork 7.0. Farmers conducted field cleaning, preparation. Banana, papaya production on seasonal decline. Chinese cabbage supplies moderate. Head cabbage supplies heavy. Head lettuce output very light. Ginger root harvest began.

IDAHO: Temperatures, precipitation below normal statewide.

No fieldwork due to weather. Main activities included feeding, caring for livestock, shipping, marketing products, cleaning corrals. Other activities included shop work, income taxes, attending marketing, education meetings. Livestock remained good. Calving, lambing active. Hay, roughage supplies adequate, some surplus.

ILLINOIS: Temperatures average 15 to 18° below normal. Precipitation scant, confined to south. Recorded amounts less than 0.25 in.

Winter wheat little to no snow cover except extreme north. High livestock stress levels.

INDIANA: Temperatures 15 to 20° below normal. Lows 0 to -7° north, single digits south. Highs low to mid teens north, low 20s south. Precipitation 0.10 in. or less. Snow cover only near Lake Michigan, extreme south.

Frozen soils allowed farmers to haul manure, move grain to elevators. Other activities: Machinery repair, tax preparation, stripping tobacco cutting wood, purchasing supplies, usual farm chores. Hay supplies adequate. Wheat mostly good. Cold weather increased care, feeding of livestock.

IOWA: Frigid only trace amounts snowfall. Temperatures averaged 12° below seasonal normals southwest to 24° below normal northeast; coldest week in 4 years.

Utilization of corn stalk fields, 36% limited, 50% moderate, 14% extensive. Availability of hay and roughage 27% surplus, 72% adequate, 1% short. Livestock mostly good. Unfavorable weather, pneumonia, and TGE most frequent causes of stress, illness, death in livestock.

KANSAS: Arctic air engulfed State. Temperatures ranged 8 to 9° western third, central, north central; 11 to 13° over south central, northeast, east central; 15° southeast. Values 17 to 21° below normal western two-third, eastern third 13 to 16° below normal. Major precipitation dropped up to 15 in. snow south central. All received some snow, depths 6 in. to 1 ft. southern third, 3 to 8 in. northwest, west central, north central, central, east central. Northeast up to 3 in. Precipitation average 0.52 to 0.60 in. west central, southwest, south central; 0.21 to 0.33 in. northwest, north central, central, southeast; 0.05 to 0.13 in. northeast, east central.

Snow over most State, depths ranged 13 in. southern districts to 1 in. northern districts. Areas light, no snow cover concern wheat crop vulnerable freeze damage first part week. Northern, central areas need more snow blanket for wheat. Heavier feeding livestock necessary early part week due colder temperatures, later week due snow covering wheat fields, pastures. Feed supplies ample.

KENTUCKY: Very cold, temperatures averaging 15 to 20° below normal. High most days only teens and 20s with lows between 0 to 10°. Snow fall totaling 1 to 4 in. 7th to 8th. Melted precipitation averaged 0.25 to 0.50 in. west and south, less than 0.25 in. north.

Agricultural activity minimal as ground froze, snow covered. Tobacco markets reopened to lower prices, increased amounts to Government Pool. Supplemental feeding heavy during cold, snow periods.

LOUISIANA: Temperatures 9 to 14° below normal. Temperature extremes 20°; 57°. Rainfall averaged 0.08 to 3.04 in.

Main activities: Livestock care, routine chores. Some stress to livestock northern half of State due to cold weather, freezing rain.

MARYLAND & DELAWARE: Maryland: Temperatures averaged 23°, 33° normal for State. Lows in -8 to -16° range in extreme western areas to mostly 8 to 13° elsewhere. High temperatures in mid to upper 20s far west to mid 40s to mid 50s elsewhere. Precipitation averaged 0.70 in., ranging from low of 0.25 in. Bel Air to 1.52 in. Snow Hill.

With bitter cold weather, snowfall fieldwork limited to 2.0 days. Small grains remained good with snow cover. Farmers caring for livestock.

Delaware: Temperatures averaged 23°, 34° normal; lowest temperatures 9 to 10°. Highest temperatures mostly in low 40s. Precipitation averaged 0.89 in., ranging from 0.53 in. Wilmington to 1.39 in. Milford.

Soil moisture adequate. Snow covered small grains good. Bitter cold with snow cover limited fieldwork to 2.0 days. Farmers caring for livestock.

MICHIGAN: Temperatures ranged 7 to 19° below normal. Temperature extremes -17°; 35°. Precipitation none to 1.58 in. across State. Heavy snow northern lower Peninsula, across Upper Peninsula. Record amounts of snow in portions of eastern Upper Peninsula. Light snow showers occurred across southern parts of State.

Activities: Marketing grain and hay, spreading manure, attending meetings, preparing tax forms; livestock good despite cold temperatures, marketing slowed by cold weather, feed supplies adequate, strong demand for oats and hay. Cold conditions made livestock care more difficult.

MINNESOTA: Temperatures averaged 13 to 21° below normal for State. Extremes -36°; 25°. Precipitation averaged 0.01 to 0.23 in. below normal. Precipitation totals averaged zero to 0.02 in. Greatest weekly total 0.05 in. Snowfall averaged 1 in. or less; snow depth weekend averaged 9 in. southwest, 2 to 6 inc. elsewhere.

Extremely cold weather slowed weight gains for livestock on feed but no abnormal cold weather management problems. Livestock feed requirements being met.

MISSISSIPPI: Temperatures 14° below normal; extremes 0°; 55°. Winter storm produced snow, freezing, cold temperatures. Greatest 24-hour total rainfall 1.11 in. Greatest weekly total rainfall 2.00 in. Snow, ice storm hit on evening of 6th. Northern portion of State received up to 10 in. snow. Central portion got ice. Tree limbs, power lines down. Southern counties received rain.

Days suitable for fieldwork 2.4, 1.3 1987, 2.1 avg. Soil moisture adequate to surplus. Wheat, pasture mostly fair. Hay, feed supplies adequate. Livestock fair to good.

MISSOURI: Temperatures averaged 14° below normal. Precipitation light, up to 0.50 in. southwest, less than 0.10 elsewhere.

Very little snow cover for wheat. Farm work limited to care of livestock, planning for new crop year.

MONTANA: Temperatures remained cold, well below normal. Temperatures averaged 9 to 18° below normal across State. Precipitation light, amounts 0.10 in. or less.

Winter wheat 15% poor, 73% fair, 12% good. Wind damage to winter wheat 77% light, 23% moderate. Snow cover protection 78% poor, 21% fair, 1% good. Cattle, calves generally 85% good, 15% excellent. Sheep, lambs 87% good, 13% excellent. Cattle receiving hay 90%, sheep 94%. Grazing 76% open, 24% difficult.

NEBRASKA: Bitter cold weather. Temperatures averaged 24° below normal west, north central to 15° below normal southeast. Extremes -30°;44°. Precipitation ranged trace to 0.10 in.

Below zero temperatures, chilling winds intensify livestock management activities. Supplemental feeding necessary in many areas. Snow cover for winter wheat remained adequate most areas.

NEVADA: Moist tropical air early brought mostly cloudy conditions, periods of showers mostly eastern areas. Much colder air end of period, precipitation mainly in form of snow.

Rain, snow, below normal temperatures hard on newborn calves, lambs. Sloppy conditions feedlots not favorable feeding operations. Warming trend early removed snow cover winter grains some areas.

NEW ENGLAND: Average precipitation (water equivalent of snow) 1.00 to 1.25 in. south, 0.25 to 0.50 in. north and Vermont. Average temperatures ranged single digits near Canadian border to near 20_0 southern coast. Temperatures below normal.

Major farm activities: Tending livestock, repairing machinery, clearing snow.

NEW JERSEY: Temperatures averaged much below normal, averaged 15_0 north, 18_0 south, 21_0 coastal. Extremes -16_0; 41_0. Precipitation below normal, averaged 0.34 in. north, 0.56 in. south, 0.54 in. coastal. Heaviest 24-hour total 0.80 in. on 8th, 9th. Heaviest 24-hour snowfall 5 in. on 8th, 9th. Depth of snow on ground 11th, 5 to 6 in. north, 7 to 9 in. central, 1 in. extreme south.

Farmers plowed snow, cared for livestock, tended to other normal winter chores.

NEW MEXICO: Average weekly temperatures continued well below normal; precipitation statewide.

Days suitable for fieldwork 3.1. Soil moisture 100% adequate. Cotton 25% fair, 75% good; 97% harvested statewide. Barley 40% fair, 60% good. Wheat 10% very poor, 25% poor, 45% fair, 20% good; very cold temperatures delaying growth. Pecans 25% poor, 50% fair, 25% good; 60 to 70% harvested statewide. Cattle 50% fair, 50% good. Sheep 44% fair, 56% good. Range 60% fair, 40% good. Onions 100% fair, lettuce planting began.

NEW YORK: Temperatures frigid over much of State lows up to 15_0 below normal. Snow early week and again weekend mainly in southeast leaving western, northern areas with little precipitation.

Routine chores, daily milking schedules occupied producers.

NORTH CAROLINA: Temperatures averaged 10 to 15_0 below normal, statewide. Temperature extremes 6_0; 48_0. Precipitation 0.22 to 4.23 in. across State.

Days suitable for fieldwork 1.9. Soil moisture 6% short, 58% adequate, 36% surplus. Wheat 2% poor, 17% fair, 81% good. Oats 3% poor, 26% fair, 71% good. Barley 25% fair, 75% good. Rye 3% very poor, 5% poor, 20% fair, 72% good. Pasture 6% very poor, 18% poor, 33% fair, 43% good. Hay, roughage supplies; feed grains supplies mostly adequate. Major farm activities: Equipment repair, maintenance; soil sampling; preparing tobacco plantbeds; tending livestock; pruning apple trees, grape vines, blueberry bushes; tax preparation; general farm maintenance.

NORTH DAKOTA: Extremely cold, dry. Temperatures averaged 15_0 below normal statewide. Extremes -35_0 south central; 26_0 south central. Precipitation below normal, heaviest north central, northeast, 0.01 in.

Soil moisture below normal. Extreme cold combined with inadequate snow cover caused concern for winter grain, alfalfa producers. Insect infestations in some stored grain. Livestock good. Feed supplies adequate.

OHIO: Average temperatures 13 to 16_0 subnormal. Daily lows in single digits, highs upper teens to lower 20s. Scant precipitation totaling mostly 0.50 in. or less. Soil temperatures at 4 in. mid 20s to low 30s.

Subnormal temperatures, wind produced cold stress for livestock. Most animals needed some protection from wind chill. Very little snow cover on winter wheat.

OKLAHOMA: Temperatures averaged 21_0 below normal Panhandle to 18_0 below normal south central. Precipitation averaged 0.25 in. south central to 0.75 in. northeast.

Major winter storm dumped up to 15 in. snow. Cattle severely stressed. Feeding demands above normal. Minimal wheat damage encountered. Cotton remained 90% harvested.

OREGON: Southwest only section of State warmer than normal; Medford warmest with average temperature 5_0 above normal. Coldest areas east central, northeast; Madras, Heppner, Pendleton coldest, all averaged 11_0 below normal. Coastal stations 2.50 to 3.00 in. of precipitation. Western interior received 1.00 to 1.50 in. most locations. Southeast up to 1.00 in. of precipitation. Central, northeast regions up to 0.50 in.

Soil moisture mostly adequate east, adequate to surplus west. Much of east frozen, snow covered. Field crop growth slowed by cold west. Pruning caneberries, blueberries, filberts, tree fruits continued. Livestock good to excellent. Winter ranges fair east, higher rangeland snow covered. Ranges, pastures mostly fair west.

PENNSYLVANIA: Colder, drier than normal. Average temperature 15_0, 12_0 below normal. Temperature extremes -12_0; 40_0. Average precipitation 0.24 in., 0.43 in. below normal.

Activities: Hauling manure; machinery maintenance; caring for livestock; final preparations for State Farm Show.

PUERTO RICO:

SOUTH CAROLINA: Temperatures averaged 12 to 15_0 below normal; 7th extremely cold with statewide highs below freezing. Severe winter storm on 6th night, 7th spread freezing rain, sleet, snow across State. Some northwest areas 12 to 18 in. of snow, heaviest snow since December of 1930.

SOUTH DAKOTA: Average temperatures 13 to 24_0 below normal. Extremes -41_0; 40_0. Snow cover 5 to 20 in. central, east central. Melted precipitation south, southwest; largest amount 0.20 in. Hot Springs.

Central part of State good snow cover on wheat, still dry. Other areas of State both dry with little snow cover and still expecting an above normal amount of winterkill. Livestock good.

TENNESSEE: Heavy snow 6th, 7th, 8th. Averaged 5 to 10 in. Temperatures averaged 13 to 19_0 below normal. Extremes -2_0; 43_0.

Tobacco sales continued. Increased livestock hay consumption because cold, snow. Livestock chores main activity.

TEXAS: An Arctic cold front invaded areas. Freezing drizzle, snow Panhandle, cold rain elsewhere. Warm air override very cold surface air, snow, sleet, freezing rain spread eastward from Panhandle, South Plains. Dry air filtered in weekend, breaks appeared in clouds. Temperatures also recovered slightly. Temperatures much below normal. Precipitation slightly below normal.

Crops: Cotton producers more harvest delays Plains. More cold weather, combined with sleet, snow, kept equipment idle most week. Gins again slowed because weather. Some cotton remaining

modules deteriorate. Cotton 99% harvested, 77% 1986, 90% avg. Small grains little or no growth most areas; overall condition not declined too rapidly. Snow cover Plains prevented serious foliage burn from cold temperatures. Many dryland fields could use additional moisture. Most fields provided limited grazing. Sunshine, warmer weather Blacklands, central would promote better growth. Wheat, oats relatively insect free. Recent moisture helped condition relatively steady. Other crops harvested: Pecans 96%, 95% 1986, 96% avg.

Commercial Vegetables: Rio Grande Valley harvest most vegetables proceeded as field conditions permitted. Crops matured slower because lack of sunshine. Demand, prices remained good. Freezing temperatures not reached Valley; no freeze damage. Citrus harvest slowed because wet conditions. San Antonio-Winter Garden harvest slowed by wet conditions. Cold temperatures not hurt crops. Pecan harvest west lingered because wet ground. Some progress as some groves drying. Low prices, labor shortage ended harvest some areas.

Range and Pasture: Range, pasture conditions suffer under winter weather. Small grains remained snow covered Plains, producers moved some livestock off because lack of forage. Slow growth other areas also limited grazing. Native pastures need warmer weather to go along with moisture. Supplemental feeding must most areas to slow down weight losses. Producers break ice many tanks northern areas.

UTAH: Precipitation moderate. Temperatures 2 to 9^{0} below normal.

Snow cover moderate. Feed supplies adequate. Livestock good to excellent. Major farm activities: Summarizing tax records, livestock chores, equipment maintenance, attending farm seminars, meetings.

VIRGINIA: Very cold. Temperatures averaged 11 to 13^{0} below normal. First major snow 7th, 8th. Total snow 6 to 10 in. inland, 2 to 4 in. near coast.

Days suitable for fieldwork 1.6. Topsoil moisture 84% adequate, 16% surplus. Cold, snow limited farm work to mostly livestock care, meetings, tax preparation. Winter grains mostly good, some cold weather stress. Some calving, lambing. Cold stressed newborn calves. Feed generally adequate. Burley tobacco marketed.

WASHINGTON: High pressure prevailed over region early week. Dry, northerly flow kept temperatures below normal. Trapped moisture near surface, kept fog low over parts of eastern areas. Snow flurries at times. Ridge broke down end of period, allowed frontal system to bring light precipitation to State.

Soil moisture 60% short, 40% adequate. Dryland wheat mostly fair, good. Adams County farmers considering spring rapeseed planting on excess, summer fallow ground. Sub-freezing temperatures continued Spokane County; growers hopeful about late emerging fall crops, but status remained unknown. Forcing for early harvest of rhubarb continued in hot houses Pierce, King Counties. Fruit tree pruning continued all districts. Wooly apple aphid infestation distributed throughout north central areas. Cattle on feed supplies adequate.

WEST VIRGINIA: Average temperature 16^{0}; 14 to 17^{0} below normal. Extremes -12^{0} Elkins, 42^{0} Williamson. Precipitation averaged 0.25 in.; 0.38 in. below normal.

Soil moisture 100% adequate. Farm activities: Livestock care, general farm maintenance. Feed supplies adequate to short.

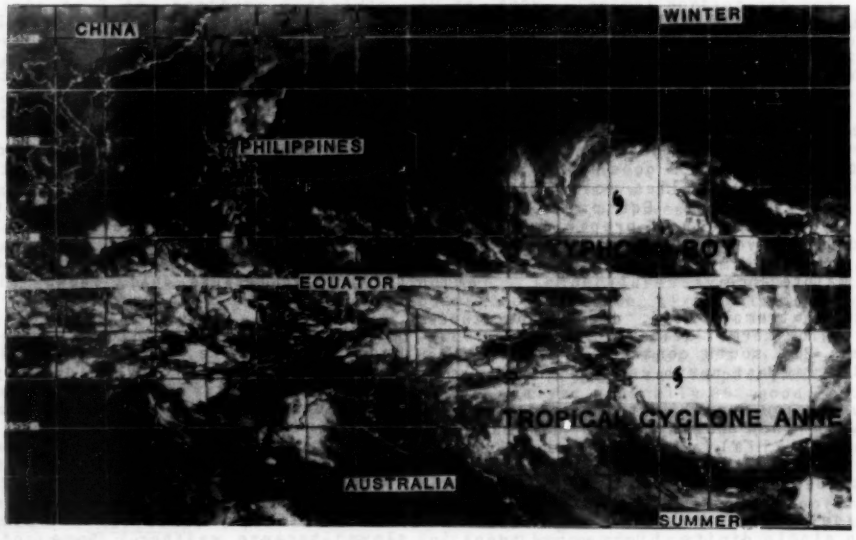
WISCONSIN: Temperatures very cold, averaged -5^{0}. Extremes -35^{0}; 20^{0}. Precipitation none to trace.

Farmers fed livestock additional feed, needed in extreme cold.

WYOMING: Temperatures below normal. Precipitation near normal.

Winter wheat fair to good. Snow cover southeastern areas protecting crop from subzero temperatures. Livestock fair to good, bitter cold temperatures and snow cover increased stress. Supplemental feeding continued in most areas. Feed supplies adequate.

WESTERN PACIFIC SATELLITE IMAGE



International Weather and Crop Summary

January 3 - 9, 1988

HIGHLIGHTS:

UNITED STATES...Cold weather slows small grain growth in the southern half of the Nation and prevents germination in the Southwest. Snow and low temperatures stress livestock in the eastern half of the Nation.

WESTERN U.S.S.R....Above-normal temperatures melt snow. Major winter wheat areas in the Ukraine and North Caucasus lack a protective snow cover.

EUROPE...Wet weather continues in the north and west. Temperatures remain normal to above normal.

SOUTH ASIA...Dry weather benefits mature rice. Moisture remains limited for vegetative to heading wheat.

NORTHWESTERN AFRICA...Dry weather continues over Moroccan winter grain areas. Beneficial rains cover northernmost crop areas in northwestern Algeria and Tunisia.

SOUTH AFRICA...Hot, dry weather stresses vegetative to reproductive corn.

SOUTHEAST ASIA...Dry weather in Indochina benefits mature rice. Seasonable showers in Malaysia and Indonesia benefit vegetative rice.

EASTERN ASIA...Cooler weather returns to China's northern growing areas. Heavy rains cause possible flooding in west central Japan.

SOUTH AMERICA...Warm, mostly dry weather promotes Argentina's wheat harvest and late soybean planting. Some rain eases dryness in Brazil's southern soybean area, while heavy showers fall in the north.

AUSTRALIA...Dry weather favors late wheat harvest in southern growing areas. Soil moisture for summer crops is generally adequate.

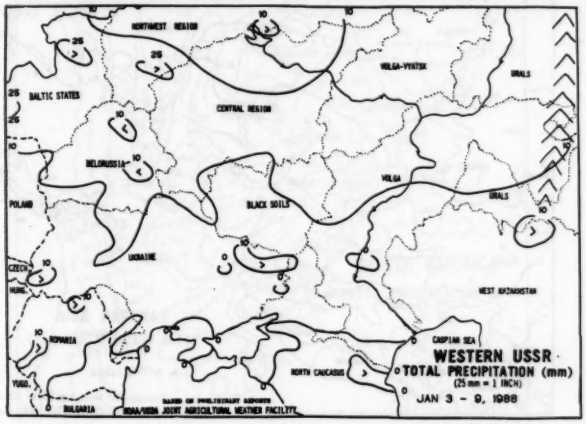
December 1987

MONTHLY DATA FROM SELECTED FOREIGN CITIES
CLIMATE ANALYSIS CENTER-NMC-NWS-NOAA
*** = DATA NOT AVAILABLE

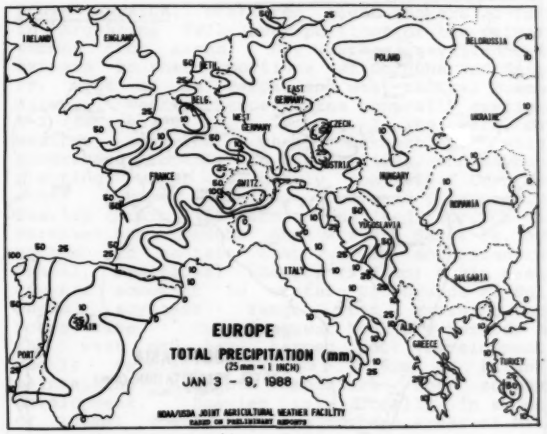
COUNTRY	CITY	TEMPERATURE (C)						PRECIPITATION (MM)	
		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	TOTAL	DPART F/NRM
NORWAY	OSLO	-3	-9	6	-20	-6	-1.0	23.1	-45.2
SWEDEN	STOCKHOLM	1	-4	7	-12	-2	-1.5	22.9	-23.8
FINLND	HELSINKI	-2	-7	4	-18	-5	-1.4	34.3	-21.9
U KING	GLASGOW	7	2	13	-8	5	0.0	95.4	-21.9
	EDINBURGH	8	3	13	-7	5	1.2	53.7	-4.7
	BIRMINGHAM	7	4	14	-8	6	1.1	30.4	-34.3
	LONDON	8	4	13	-4	6	1.8	25.6	-51.1
IRELND	DUBLIN	9	6	14	-1	8	2.0	40.0	-38.9
ICELND	REYKJAVIK	5	3	9	-7	4	4.2	73.1	-3.0
DENMRK	COPENHAGEN	5	1	9	-9	3	0.4	32.7	-16.3
LUXEMB	LUXEMBOURG	4	0	13	-9	2	0.7	37.9	-38.5
SWITZL	ZURICH	4	1	12	-7	3	2.0	44.5	-30.6
	GENEVA	5	2	14	-2	4	1.6	39.9	-40.5
FRANCE	PARIS	7	2	15	-8	5	0.2	30.7	-20.1
	STRASBOURG	5	1	15	-9	3	0.9	45.8	12.9
	BOURGES	8	3	15	-5	5	1.1	64.0	3.1
	BORDEAUX	11	5	20	-1	8	2.0	24.6	-79.3
	TOULOUSE	11	5	21	-4	8	2.2	15.6	-43.2
	MARSEILLE	13	5	18	-2	9	1.5	42.2	-20.8
SPAIN	VALLADOLID	9	4	18	-6	7	2.4	48.6	7.8
	MADRID	11	5	18	-5	8	2.4	76.3	30.4
	SEVILLE	17	10	20	6	14	2.5	243.1	165.3
E GRMY	LEIPZIG	4	0	15	-10	2	0.9	43.9	6.7
	DRESDEN	4	1	14	-13	2	1.8	66.8	29.8
W GRMY	HAMBURG	4	1	13	-8	3	0.7	54.0	-16.7
	BERLIN	4	1	13	-7	3	1.1	49.7	0.7
	DUSSELDORF	7	3	23	-10	5	1.6	49.9	-8.0
	STUTTGART	5	-1	14	-12	2	1.6	32.7	-13.6
	NURNBERG	4	0	14	-14	2	1.5	60.1	10.7
	MUNICH	4	-1	13	-15	2	1.8	65.6	13.7
AUSTRI	VIENNA	4	0	15	-11	2	1.7	46.4	9.3
	INNSBRUCK	4	-2	9	-10	1	2.1	63.7	11.8
CZECH	PRAGUE	3	-1	12	-12	1	1.6	40.8	16.5
POLAND	WARSAW	2	-1	11	-10	1	1.5	41.8	9.5
	LODZ	2	-1	10	-10	1	1.7	65.2	23.3
	KATOWICE	2	-1	10	-13	0	1.5	66.6	22.7
	PRZEMYSL	2	-2	10	-10	0	0.1	65.6	25.7
HUNGAR	BUDAPEST	4	0	15	-7	2	1.5	34.4	-5.9
YUGOSL	SARAJEVO	3	-2	14	-12	0	0.8	70.1	-33.8
ROMANI	BUCHAREST	3	-2	15	-14	0	-0.1	30.1	-16.4
BULGAR	SOFIA	4	-1	14	-11	2	1.7	47.1	-15.3
ITALY	MILAN	7	3	12	-3	5	2.6	45.4	-20.8
	VERONA	7	2	11	-3	4	2.6	42.2	-9.1
	VENICE	7	2	12	-4	4	0.6	22.2	-43.9
	GENOA	12	8	18	1	10	0.9	41.4	-66.0
	ROME	15	7	17	-1	11	2.0	95.6	9.2
	NAPLES	16	7	20	2	12	2.4	110.6	-8.1
GREECE	THESSALONIKA	11	5	16	-2	8	0.7	37.2	-17.5
	LARISSA	10	3	14	-4	7	-0.3	37.9	-18.8
	ATHENS	15	9	20	2	12	-0.7	29.1	-38.8
TURKEY	ISTANBUL	9	5	19	-2	7	-0.7	120.5	29.5
	ANKARA	5	-2	14	-13	2	0.0	56.3	27.3
CYPRUS	LARNACA	18	9	28	1	14	-0.2	117.4	14.3
USSR	TALLINN	0	-4	5	-16	-2	0.0	38.1	-9.4
	LENINGRAD	-4	-7	3	-17	-6	-1.2	41.7	-1.9
	KAUNAS	1	-3	9	-13	-1	1.2	49.1	4.6
	MINSK	-2	-6	7	-19	-4	0.0	66.9	24.2
	KAZAN	-9	-15	-2	-32	-12	-2.5	43.0	9.6
	MOSCOW	-5	-10	1	-20	-7	-1.4	45.3	1.5
	SVERDLOVSK	-9	-16	-2	-30	-13	-1.3	12.1	-9.7
	OMSK	-9	-15	1	-31	-12	2.6	24.2	7.6
	KUSTANAY	-7	-14	1	-34	-10	2.5	26.6	8.9
	KRASNOYARSK	-7	-13	5	-27	-10	4.2	32.8	8.7
	NOVOSIBIRSK	-7	-13	3	-37	-10	5.9	52.4	29.5
	BARNAUL	-7	-14	4	-30	-11	3.6	26.4	-5.8
	KHABAROVSK	-16	-23	0	-30	-20	-1.7	15.1	-3.5
	VLADIVOSTOK	-6	-12	4	-22	-9	0.4	12.4	-4.0
	KIEV	-1	-5	7	-14	-3	-0.8	42.0	-2.5
	LVOV	0	-4	10	-14	-2	-0.3	82.4	28.9
	KIROVOGRAD	-1	-6	6	-16	-3	-1.0	26.8	-10.6

COUNTRY	CITY	TEMPERATURE (C)						PRECIPITATION (MM)	
December 1987		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	TOTAL	DPART F/NRM
USSR	ODESSA	3	-2	9	-10	1	-0.7	16.6	-28.2
	YALTA	7	3	16	-5	5	-1.0	121.0	41.0
	VORONEZH	-5	-10	2	-21	-8	-2.4	35.2	-13.0
	SARATOV	-6	-11	1	-23	-9	-1.3	38.5	7.4
	KHARKOV	-2	-7	4	-17	-5	-1.4	27.0	-18.0
	VOLGOGRAD	-3	-9	8	-22	-6	-1.1	24.3	-20.7
	ROSTOV	-1	-5	6	-16	-3	-1.5	79.4	16.3
	ASTRAKHAN	1	-5	7	-14	-2	0.3	6.6	-8.9
	KRASNODAR	3	-3	10	-14	0	-2.0	89.9	14.9
	ORENBURG	-8	-15	1	-35	-12	-1.7	31.6	0.2
	TSELINOGRAD	-8	-15	3	-36	-12	3.2	36.7	27.0
	KARAGANDA	-6	-14	4	-30	-10	1.7	33.1	15.3
	TBILISI	7	1	12	-7	4	-0.1	41.8	18.1
	TASHKENT	12	3	23	-5	8	5.3	20.7	-31.7
	ASHKHABAD	13	1	27	-7	7	3.4	20.5	-1.2
SYRIA	DAMASCUS	14	5	20	-2	9	1.3	26.8	-19.6
ISRAEL	JERUSALEM	14	7	21	1	10	-0.3	229.5	118.6
PAKIST	KARACHI	28	11	32	7	20	0.2	0.1	-7.6
INDIA	AMRITSAR	22	3	26	-1	13	-0.2	6.1	-8.8
	NEW DELHI	24	8	29	4	16	0.2	10.1	2.6
	AHMEDABAD	29	16	35	14	23	1.3	14.1	12.2
	INDORE	27	10	31	6	19	-0.1	0.9	-8.3
	CALCUTTA	27	15	30	11	21	0.7	4.3	1.3
	VERAVAL	32	18	35	15	25	1.4	0.1	-1.2
	BOMBAY	33	20	35	16	27	1.7	9.4	8.5
	POONA	29	13	32	7	21	0.1	35.4	30.9
	BEGAMPET	28	17	29	12	22	1.0	2.0	-3.6
	MADRAS	28	23	30	19	25	0.7	352.0	212.6
	MANGALORE	33	22	35	18	28	0.9	17.1	-0.9
H KONG	HONG KONG	20	15	26	8	17	-0.4	0.5	-25.2
N KREA	PYONGYANG	2	-8	9	-16	-3	1.1	1.1	-21.0
S KREA	SEOUL	5	-2	12	-11	2	2.7	2.1	-29.9
JAPAN	SAPPORO	1	-5	8	-12	-2	-0.9	120.0	15.1
	NAGOYA	13	3	18	-1	8	1.7	8.1	-40.0
	TOKYO	12	4	22	1	8	0.9	51.5	-4.9
	YOKOHAMA	12	4	21	0	8	0.5	54.0	-4.7
	KYOTO	12	3	19	-1	8	2.0	17.5	-35.5
	OSAKA	13	5	19	1	9	1.3	16.0	-26.1
THAILN	PHETCHABUN	29	14	33	10	22	-1.2	0.1	0.1
	BANGKOK	30	19	33	13	25	-1.3	0.1	-10.8
MALAYS	KUALA LUMPUR	31	24	33	22	27	1.1	371.8	141.9
VIETNM	HANOI	21	14	25	9	17	-1.0	0.1	-20.2
CHINA	HARBIN	-9	-19	4	-30	-14	3.3	4.5	-1.3
	HAMI	-3	-12	1	-19	-8	0.1	1.4	0.9
	LANCHOW	4	-8	10	-10	-2	3.1	0.6	-0.6
	BEIJING	6	-5	14	-11	0	2.7	3.0	0.4
	TIENTSIN	5	-5	14	-11	0	1.6	2.0	-1.7
	LHASA	9	-8	20	-12	1	1.2	0.1	0.1
	KUNMING	12	2	18	-4	7	-1.3	19.2	6.1
	CHENGCHOW	10	-3	22	-9	4	3.0	0.1	-9.4
	YEHCHANG	14	4	22	-1	9	1.9	6.9	-16.2
	HANKOW	13	1	23	-4	7	2.0	0.1	-30.9
	CHIHKIANG	15	3	23	-2	9	1.2	5.3	-30.5
	SHANGHAI	12	1	23	-3	6	0.2	0.1	-40.9
	NANCHANG	13	3	24	-1	8	0.5	0.1	-47.1
	TAIPEI	20	16	27	11	18	1.0	54.3	-19.6
	CANTON	21	11	28	4	16	0.4	10.1	-16.2
	NANNING	20	9	26	4	15	-0.4	0.1	-26.4
CNRY I	LAS PALMAS	23	16	28	12	19	1.5	4.6	-25.3
MOROCC	CASABLANCA	19	11	24	7	15	2.4	69.5	-28.1
	MARRAKECH	19	9	24	5	14	2.2	45.1	12.5
ALGERI	ALGER	19	9	25	3	14	2.6	30.4	-91.4
	BATNA	13	4	20	-2	9	2.6	48.9	18.9
TUNISI	TUNIS	19	10	24	2	14	2.0	8.7	-43.7
NIGER	NIAMEY	33	18	39	14	26	1.0	0.1	0.1
MALI	TIMBUKTU	32	15	38	8	24	1.6	0.1	0.1
	BAMAKO	33	21	38	16	27	2.5	0.1	0.1
MAURIT	NOUAKCHOTT	31	17	37	12	24	2.5	0.1	-6.4
SENEGL	DAKAR	28	20	34	18	24	1.4	0.1	0.1
CHAG A	DIEGO GARCIA	30	26	31	24	28	1.0	432.8	168.2
LIBYA	TRIPOLI	21	10	31	6	16	2.2	5.6	-60.7
	BENGHAZI	19	12	27	4	16	1.6	8.2	-57.0
EGYPT	CAIRO	20	12	27	7	16	0.8	10.1	3.1
	ASWAN	23	12	29	7	18	0.0	0.1	0.1
ETHIOP	ADDIS ABABA	24	6	29	2	15	-0.6	0.5	-17.8
KENYA	NAIROBI	28	13	30	1	20	0.9	21.1	-50.2

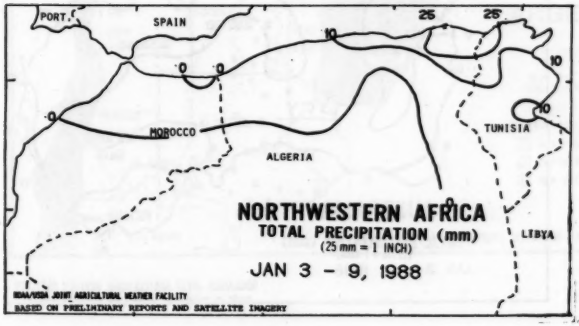
COUNTRY	CITY	TEMPERATURE (C)						PRECIPITATION (MM)	
December 1987		AVG MAX	AVG MIN	HI MAX	LO MIN	AVG	DPART F/NRM	TOTAL	DPART F/NRM
TANZAN	DAR ES SALAAM	32	24	33	22	28	0.6	32.5	-68.3
GABON	LIBREVILLE	30	25	32	22	27	0.6	94.1	-241.6
TOGO	LOME	32	24	34	20	28	1.1	7.1	-1.9
B FASO	OUAGADOUGOU	34	18	38	14	26	0.3	0.1	0.1
IVRY C	ABIDJAN	31	25	33	19	28	1.3	57.4	-43.9
MOZAMB	MAPUTO	30	23	35	18	27	1.6	34.1	-57.3
ZAMBIA	KABWE	24	**	24	**	**	***	24.3	-226.8
ZIMBAB	HARARE	27	18	30	15	22	1.8	249.2	64.1
S AFRI	PRETORIA	28	18	33	15	23	2.0	70.7	-40.5
	KROONSTAD	30	16	35	9	23	0.9	55.6	-39.4
	JOHANNESBURG	26	16	30	13	21	2.4	114.0	6.1
	BETHAL	25	16	29	12	20	1.0	139.6	14.6
	DURBAN	27	22	33	18	24	1.7	126.8	21.8
	CAPE TOWN	24	15	30	10	19	-0.2	24.2	8.2
CANADA	TORONTO	3	-3	13	-16	0	3.1	47.6	-17.1
	MONTREAL	0	-7	7	-21	-3	3.3	54.3	-32.3
	WINNIPEG	-5	-12	3	-26	-8	5.6	14.9	-4.3
	REGINA	-1	-13	12	-28	-7	5.7	2.6	-14.1
	SASKATOON	-3	-13	8	-27	-8	5.8	11.4	-8.1
	LETHBRIDGE	4	-9	16	-25	-3	3.1	13.0	-8.8
	CALGARY	3	-9	12	-24	-3	4.8	4.9	-11.6
	EDMONTON	1	-9	9	-19	-4	6.2	7.0	-17.7
	VANCOUVER	6	1	13	-4	4	-0.4	155.1	-27.3
MEXICO	GUADALAJARA	25	8	28	3	16	0.7	7.1	-9.5
	MEXICO CITY	24	9	27	5	16	4.0	0.1	-16.2
	ACAPULCO	33	22	35	16	27	0.5	0.1	-7.3
BERMUD	ST. GEORGES	21	17	23	11	19	0.2	53.5	-62.6
BAHAMA	NASSAU	26	18	30	13	22	0.4	47.5	-0.4
CUBA	HAVANA	27	20	31	15	23	1.3	66.2	16.6
JAMAIC	KINGSTON	32	24	35	22	28	1.7	36.8	-1.1
P RICO	SAN JUAN	30	23	33	21	27	1.1	197.2	85.6
GUADEL	RAIZET	31	22	32	20	26	1.8	40.7	-60.6
MARTNQ	LAMENTIN	30	25	31	23	27	2.8	29.5	-116.4
BARBAD	BRIDGETOWN	29	25	30	23	27	1.1	38.8	-64.0
TRINID	PORT OF SPAIN	31	23	33	21	27	2.3	49.1	-86.2
COLOMB	BOGOTA	20	6	22	0	13	0.3	28.9	-12.0
VENEZU	CARACAS	32	24	34	21	28	3.0	0.6	-58.7
F GUIA	CAYENNE	32	24	34	23	29	3.3	21.6	-315.5
BRAZIL	FORTALEZA	32	26	33	24	29	1.2	4.3	-33.4
	RECIFE	31	24	33	21	27	0.9	8.1	-44.8
	BELO HORIZONTE	28	19	31	17	23	0.8	595.4	314.5
	CAMPO GRANDE	31	21	39	16	26	1.1	198.3	7.3
	FRANCA	27	18	30	15	23	1.6	202.0	-68.0
	RIO DE JANEIRO	30	24	35	21	27	1.4	85.5	-51.4
	LONDRINA	30	19	33	16	24	1.1	163.6	-72.7
	SANTA MARIA	29	18	38	13	23	-0.5	121.6	-1.3
	PORTO ALEGRE	29	20	39	16	24	0.9	124.4	36.5
PERU	LIMA	26	19	28	17	22	2.1	0.1	-0.2
BOLIVI	LA PAZ	17	4	21	2	10	0.5	33.6	-67.8
CHILE	SANTIAGO	29	11	33	8	20	0.4	0.1	-2.3
ARGENT	IGUAZU	30	19	36	13	25	***	203.8	****
	FORMOSA	32	20	38	13	26	-1.3	148.0	29.0
	CERES	30	17	38	13	23	-1.2	102.5	-22.5
	CORDOBA	27	16	39	11	21	-1.2	162.0	23.7
	RIO CUARTO	26	15	41	9	21	-1.2	166.0	24.7
	ROSARIO	27	17	36	11	22	-0.2	112.8	4.0
	BUENOS AIRES	27	15	36	7	21	-0.4	76.8	-8.0
	SANTA ROSA	28	14	36	6	21	-1.3	34.7	-39.9
	TRES ARROYOS	25	12	33	5	19	-0.8	83.9	14.2
MIDW I	MIDWAY ISLAND	24	19	28	14	21	1.1	26.2	-177.4
N CALD	NOUMEA	28	22	30	20	25	0.2	147.5	83.1
FIJI	NAUSORI	29	24	30	19	26	0.7	269.9	-87.2
SAMOA	PAGO PAGO	31	25	32	22	28	1.1	423.1	56.4
TAHITI	PAPEETE	30	24	33	21	27	0.5	330.0	75.1
N ZEAL	AUCKLAND	22	15	27	11	18	0.4	133.7	46.1
	WELLINGTON	19	12	25	8	16	0.4	75.0	-20.2
PA N G	PORT MORESBY	31	26	34	24	28	0.3	101.4	-42.8
AUSTRL	DARWIN	31	27	34	23	29	-0.3	540.9	303.8
	MOREE	32	21	37	13	26	0.9	58.2	-2.7
	BRISBANE	28	21	30	15	24	0.0	46.0	-99.7
	PERTH	28	17	41	12	23	0.2	43.4	31.5
	CEDUNA	24	17	33	11	20	-0.2	12.7	-4.3
	ADELAIDE	24	16	38	10	20	0.4	14.7	-11.5
	MELBOURNE	20	13	32	7	16	-1.7	113.4	65.5
	WAGGA	28	16	38	7	22	0.9	23.8	-25.2
	CANBERRA	24	11	34	2	18	-0.4	116.0	61.6
PHILIP	MANILA	31	23	34	19	27	1.2	40.9	-20.8



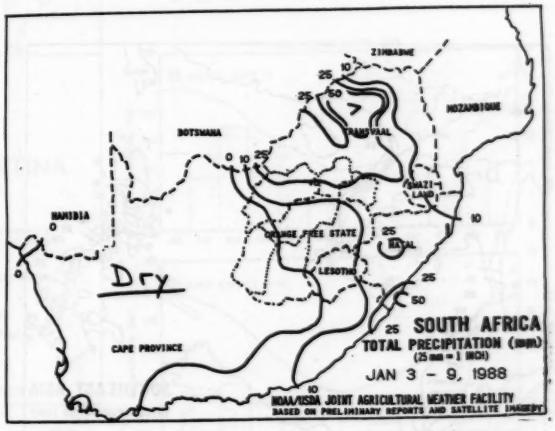
WESTERN U.S.S.R...Above-normal temperatures continued over much of the region. Weekly average temperatures were 4 to 7 degrees C above normal across the north and 7 to 10 degrees C above normal across major winter wheat-producing areas in the south. The weather was warm enough along the Black Sea Coast to cause winter grains to slip out of dormancy. Maximum temperatures, ranging from 1 to 3 degrees C in the north and 3 to 10 degrees C in the west and south, continued to melt snow. Winter grains in the Baltic States, Belorussia, the Ukraine, and the North Caucasus lack a protective snow cover. A deep snow cover existed over the Central Region, Volga Vyatsk, and the upper Volga. Light precipitation, mainly rain, covered much of the region.



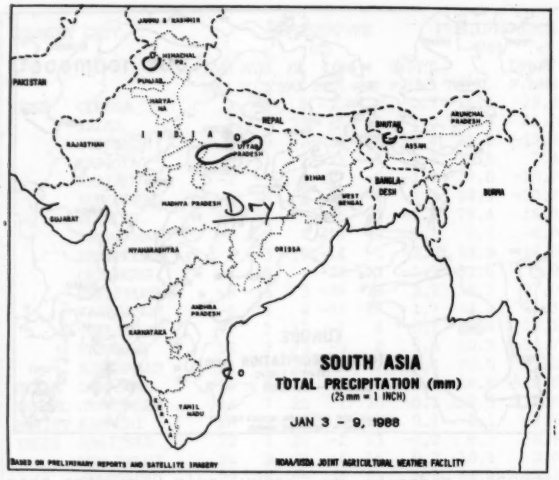
EUROPE...Moderate to heavy rain (greater than 20mm) covered much of northern and western Europe, keeping soils unfavorably wet. Heavy rain also fell over western sections of Yugoslavia, favoring mostly dormant winter grains. In contrast, only scattered light rain covered the remainder of southern and eastern Europe. Soils in sections of Romania, Yugoslavia, and Bulgaria are becoming increasingly dry, and dormant winter grains would benefit from rainfall. Temperatures during the period remained normal to above normal across the continent.



NORTHWESTERN AFRICA...The third consecutive week of dry weather covered Moroccan winter grain areas. Although soil moisture was adequate for winter grains in the early vegetative stage, the combination of continued dry weather and this past week's above-normal temperature pattern lowered moisture reserves. Dry weather returned to winter grain areas in central and western Algeria, following beneficial rains the previous week. In eastern Algeria and Tunisia, widespread rain (10-46mm) eased persistent dryness in northern most winter grain areas. Southern crop areas remained unfavorably dry.

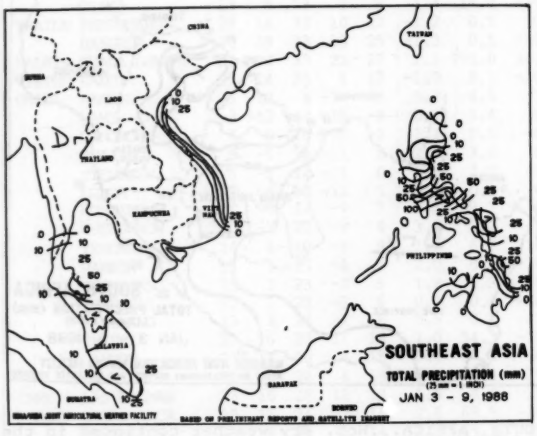


SOUTH AFRICA...Hot, dry weather continued in the western Maize Triangle and reached further into major production areas of the central Maize Triangle, stressing vegetative to tasseling corn. Minimal rain (less than 10mm) and temperatures reaching the midthirties C covered the northern Orange Free State, an area normally accounting for about 30% of South Africa's total production. Light to moderate rain (10-50mm) covered the south-central Transvaal and Natal as heavy rain (50mm or more) fell over north-central Transvaal. Temperatures averaged in the low to midtwenties C in Transvaal and Natal, but early-week temperatures reached the upper thirties in the driest areas, stressing corn in or nearing reproduction.

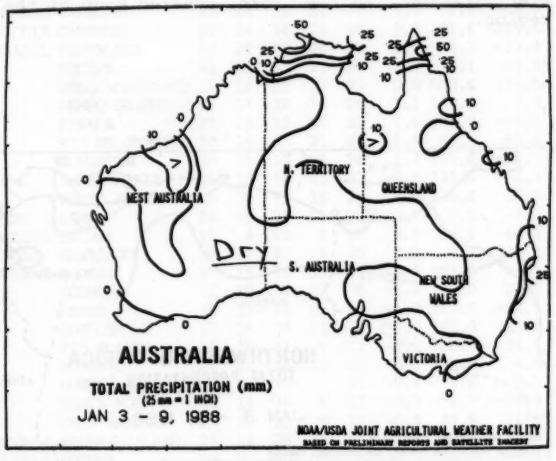


SOUTH ASIA...Dry weather continued throughout the major crop regions, benefiting mature rice in eastern India. Unfavorably low moisture levels continued for central and northern India's wheat in the vegetative and heading stages of development. Dry weather in the south favored early cotton harvesting, but moisture may be limited in some rainfed crop areas due to the seasonal decline in rainfall.

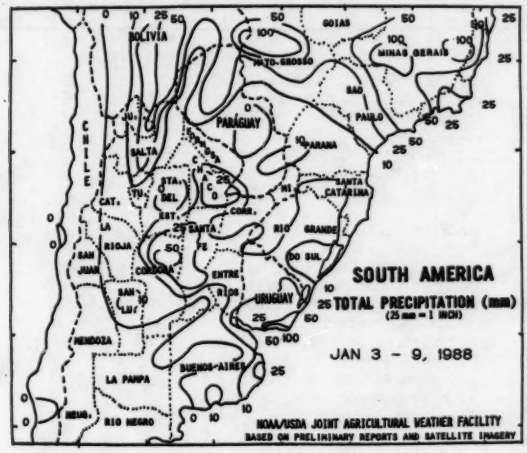
EASTERN ASIA...Scattered light rains (up to 20mm) covered southern and central China, favoring secondary crops in the south and winter grains across southern sections of the wheat belt. Temperatures across northern crop areas returned to more seasonal levels after nearly a month of warmer than normal weather. Scattered light rain and light snow covered the North China Plain, favoring dormant winter grains. January is normally among the driest months of the year in northern crop areas. Elsewhere, heavy rain (greater than 100mm) fell over west central sections of Japan, possibly causing flooding.



SOUTHEAST ASIA...Seasonable dry weather continued in Indochina, benefiting mature rice. Light to moderate showers (10-50mm) continued along the Malay Peninsula with heavier rain (50-100mm or more) covering most regions of Indonesia. The rainfall boosted moisture levels for rice irrigation. In the Philippines, seasonal showers continued along east-coast areas with pockets of heavy rain (50-100mm or more) over southern Luzon. Light rain (less than 7mm) covered grains in northern Luzon.

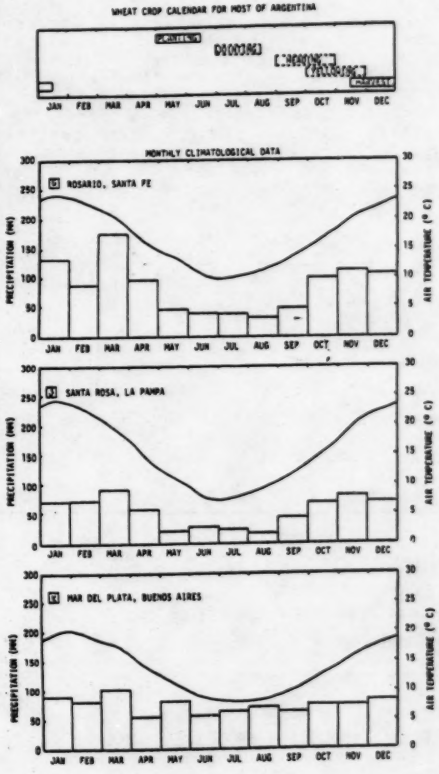


AUSTRALIA...Dry weather covered most of the southern wheat growing areas, allowing progress in late wheat harvesting. Scattered showers fell over coastal areas of southeastern Queensland and New South Wales, while interior summer crop areas remained mostly dry. Soil moisture was generally adequate for summer crops. Scattered showers also continued over Queensland's northeastern sugarcane areas, although amounts and coverage were much less than those of last week. Rainfall over the past 2 weeks ended several weeks of dry weather and has improved growing conditions for vegetative sugarcane.



SOUTH AMERICA...Scattered light showers (1-7mm) in Argentina fell over portions of the primary summer crop areas. Dry weather prevailed over extreme southern portions of Cordoba and Santa Fe, most of La Pampa, and west-central Buenos Aires. Weekly temperatures generally averaged 1-2 degrees C above normal. The warm, dry weather favored wheat harvesting, which progressed rapidly in Buenos Aires, and soybean planting, which is nearly complete. Corn and other summer grains developed favorably. Heavier rain (10-66mm) benefited sorghum in northwestern Cordoba and western Santa Fe, and cotton in eastern Chaco. In south-central Brazil, beneficial showers (9-21mm) again eased dryness somewhat in western Rio Grande do Sul, where soybeans range from emerging to pod-setting. The frequent hot, dry periods in the west may have harmed root development. Weekly rainfall averaged 10-16mm in Parana, maintaining adequate moisture for soybean development. Heavier rain (locally, in excess of 100mm) soaked northern soybean areas of Mato Grosso do Sul, Goias, and Minas Gerais.

ARGENTINE WHEAT AREAS AND CLIMATIC PROFILES


WHEAT CROP CALENDAR FOR MOST OF ARGENTINA
PLANTING
HARVEST
JAN FEB MAR APR MAY JUN JUL AUG SEP OCT NOV DEC
MONTHLY CLIMATOLOGICAL DATA
G ROSARIO, SANTA FE
J SANTA ROSA, LA PAMPA
K MAR DEL PLATA, BUENOS AIRES
PRECIPITATION (mm)
AIR TEMPERATURE (° C)

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(Continued from p. 1)

Moderate to heavy rain fell in peninsular Florida, where above-normal temperatures prevailed. Rainshowers were scattered from northern California to the Pacific Northwest, where heavy snow fell at higher elevations.

SATURDAY...Clearing gradually occurred in the Northeast, in the wake of the winter storm that dominated most of the week's weather. Lake-effect snow squalls continued from Ohio to upstate New York. Another winter storm invaded the Pacific Northwest, spreading snow and freezing rain as far east as Montana. Warm weather continued in peninsular Florida, as rains diminished. Temperatures remained below freezing throughout the day as far south as northern Alabama and northern Mississippi.

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